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In the Supreme Court of the United States

OCTOBER TERM, 1924

THE SANITARY DISTRICT OF CHICAGO,
appellant

v.

THE UNITED STATES OF AMERICA,
appellee

No. 161

APPEAL FROM THE DISTRICT COURT OF THE UNITED
STATES FOR THE NORTHERN DISTRICT OF ILLINOIS,
EASTERN DIVISION

BRIEF FOR APPELLEE

ARGUMENT ON THE FACTS

(Pages 1—122.)

INTRODUCTORY STATEMENT

This case, which was subjected to the unprecedented delay of over *fifteen* years in the court below, involves the right of the appellant, Sanitary District of Chicago, to divert from Lake Michigan an indefinite and increasingly large amount of water, in defiance of legislation by Congress and of rulings by the Department of War. The appellant has a

permit from the War Department to divert 4,167 cubic feet per second (hereinafter abbreviated as "c. s. f."); it is actually diverting at least 10,000 c. s. f.

The Sanitary District of Chicago is a municipal corporation created in 1889 under a statute enacted by the Illinois Legislature in that year. As such corporation it is entirely separate from and independent of the city of Chicago; the area of the district served by appellant includes not only Chicago but suburbs to the north and to the west and southwest. Chicago is, therefore, in the unique position of having its water supply and sewage disposal problem handled by *two* municipal corporations. As the result of appellant's diversion works, the city has profited by an exceptionally cheap water supply in comparison with that of other cities situated on the Great Lakes.

The total area of appellant's district is 437.39 square miles and it had a population in 1922 of 3,142,000. In addition to disposition of the sewage of the population, it has the duty of disposing of industrial wastes which are equivalent to the sewage of an additional population of 1,500,000. It is estimated that by 1960 the population and industrial equivalent of appellant's district will total 8,160,000. (Appellant's Narrative, pp. 361-362.) Appellant's organic act requires it to divert through its canal 20,000 cubic feet of water per minute for each 100,000 of population (333 c. s. f.).

The diversion complained of by appellee is accomplished by turning from the Great Lakes and into

the Mississippi Valley a large navigable river, equivalent in flow to the sum of the three principal tributaries of Lake Michigan. This is done through appellant's canal, referred to in its brief as the "Sanitary and Ship Canal." The canal is about 28 miles long and extends from a tributary of the Chicago River southwest across the divide to just north of Joliet, Illinois, where it empties into the Des Plaines River. The location of this canal, and its relation to the Chicago River, is explained by the map to be found in Appellant's Narrative (opposite page 92). Chicago River proper is very short and flows east into Lake Michigan (it is shown in yellow on the map and enters Lake Michigan at a point just north of the notation "Chicago Harbor" on the lake). It is formed by two branches meeting at about a mile inland (also shown in yellow on the map), and known as the North and South Branches of the Chicago River. About three miles south of the juncture of these two branches the South Branch is formed by two forks, the West Fork and the South Fork.

Appellant's canal connects with the West Fork of the South Branch of the Chicago River. The old Illinois and Michigan Canal connects with the South Fork from which for many years before 1900 the city diverted a small amount of water by means of a pumping station. Appellant's diversion of water from Lake Michigan is distributed as follows:

- (1) Through the Main Channel of the Chicago River, 6250 c. s. f.

(2) Through the North Branch of the Chicago River (which is connected with Lake Michigan by a canal north to Wilmette, Illinois, and by a conduit at Lawrence Avenue—both marked yellow on the map), 1750 c. s. f.

(3) Through the 39th Street conduit (which empties into an arm of the South Fork of the South Branch and thence flows into the West Fork), 2,000 c. s. f.

This is a total of 10,000 c. s. f. (See Appellant's Brief, pp. 13-14.)

There is a further diversion of 2,000 c. s. f. by appellant by means of another canal which runs from the Little Calumet River to the appellant's main canal at Sag, Illinois. It is shown in red on the map. The Calumet River, to which the Little Calumet is tributary, enters into Lake Michigan at a point several miles south of the mouth of the Chicago River.

Appellant's main canal has a constructed capacity of 14,000 c. s. f., at least in the rock section. Excavation began in 1893. It was connected with the West Fork of the South Branch on January 17, 1900. The Wilmette Canal was completed in 1910 and the Calumet-Sag Canal in 1922.

By reason of the large diversion of water and its potential power, appellant was able to install a large hydro-electric plant in 1907, just north of Joliet. The power energy is converted into electricity and is sold to the profit of appellant to municipalities, parks, and districts.

The appellant's brief and narrative statement gives a misleading impression of the issues involved on this appeal. Its statements that "there is no question of pleading involved" and that with certain exceptions "there is no dispute as to any facts in the record" (Appellant's Brief, p. 4) are contradicted by the record. So also is the heading "Undisputed Evidence" with which appellant has inaccurately entitled a large portion of its narrative statement (pp. 163-344).

When the decree was entered by the court below, there was pending a motion by the appellee made on the filing of the answers, to strike certain portions of the appellant's answer in the Main Channel Suit. These portions set up the affirmative defenses upon which the appellant then and now places its chief reliance. The so-called "undisputed evidence" consists of evidence, offered and received by the commissioner over the objection of the appellee, in support of these portions of appellant's answer. It was not necessary for appellee to offer evidence in rebuttal on these issues, as it relied upon its motion which was to strike out untenable defenses, which motion was based on the theory that the averments of the answer did not set up any admissible defense. It was understood throughout the entire litigation that if any of these averments should be held to constitute an admissible defense, the appellee should have the right to offer testimony upon the issue thus raised, and the court reserved this right to the appellee.

Judge Landis, in his oral opinion rendered June 19, 1920 (Rec. Vol. VIII, p. 151), held that none of the matters, set up in these portions of appellant's answer, constituted a defense, and said he would enter an order sustaining the appellee's exceptions thereto. Judge Carpenter came to the same conclusions, as will be seen by reference to his opinion filed June 18, 1923. (Rec. Vol. VIII, p. 127.) While no order striking this portion of the answer was ever actually entered, the final decree was understood by both parties as necessarily accomplishing the same result. Consequently, if this Court should be of the opinion that these portions of the answer *do* allege a sufficient defense, the appellee will be entitled to an opportunity to rebut the so-called "undisputed evidence."

There is therefore a very serious dispute, as a matter of fact, as to the correctness of the conclusions advanced by appellant's witnesses. The fact that other cities on the Great Lakes and elsewhere, some of which are nearly as great in size as Chicago was when the appellant's canal was built, have been able satisfactorily to solve their sewage and drinking water problems without recourse to the extreme method employed by appellant, and without suffering from typhoid or other epidemics, is sufficient to indicate that the appellant's witnesses have not said the last word upon the subject. Equally suggestive are certain inadvertent admissions to be found here and there both in the testimony and in appellant's brief.

The issues involved in the two suits and a brief history of the proceedings in the trial court

The issues presented by this appeal can not be thoroughly understood without a brief analysis of the pleadings in the two suits, which, although consolidated, do not present altogether identical questions. For convenience, these two suits will be referred to as (1) The Calumet River Suit and (2) The Main Channel Suit. Before undertaking this analysis we take this occasion to call the Court's attention to the fact that it is now *sixteen* years since the institution of the first suit. Six years (1908-1914) were consumed in the taking of testimony; for six years more (1914-1920) the case was held under advisement by Judge Landis; for three years more the case was pending on appellant's motion for a modification of the terms of the decree for an injunction which Judge Landis indicated he would enter, but never did. Against this delay the Government continuously protested. This Court will form its own judgment as to the sufficiency of Judge Landis's reasons for denying the Government a formal decree, to which he had recognized it was justly entitled. If the Government refrains from further comment on this matter, its reticence should not be regarded as an implied recognition of the sufficiency of Judge Landis's reasons.

For convenience we here set forth Section 10 of the River and Harbor Appropriation Act of

March 3, 1899 (30 St. at L., p. 1151, Ch. 425), for it is on this statute that the rights of the appellee are to a large extent based:

That the creation of any obstruction not affirmatively authorized by Congress, to the navigable capacity of any of the waters of the United States is hereby prohibited; and it shall not be lawful to build or commence the building of any wharf, pier, dolphin, boom, weir, breakwater, bulkhead, jetty, or other structures in any port, roadstead, haven, harbor, canal, navigable river, or other water of the United States, outside established harbor lines, or where no harbor lines have been established, except on plans recommended by the Chief of Engineers and authorized by the Secretary of War; and it shall not be lawful to excavate or fill, or in any manner to alter or modify the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor of refuge, or enclosure within the limits of any breakwater, or of the channel of any navigable water of the United States, unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of War prior to beginning the same.

In our summary of the pleadings we refer to the appellee and appellant as complainant and defendant respectively.

A. Calumet River suit

The bill in this case was filed March 23, 1908. It sought to prevent the defendant from doing two

things: (1) reversing the direction in which the Calumet River flowed, clearly a "modification" of the condition of a navigable river within any definition of that term, and (2) the withdrawal of water from Lake Michigan in a different way and in a larger amount than was authorized by the Secretary of War. The answer of the defendant was filed March 23, 1908. The issues presented by these pleadings may be summarized as follows:

The bill averred that the Calumet River is one of the navigable waters of the United States. The answer admitted that the Calumet River is navigable for part of its course, but denied the navigability of its upper portion and certain branches. No point, however, has ever been made on this question for the obvious reason that it is admitted that what was proposed to be done by the defendant would affect the navigable portion of the river if it affected the river at all. The bill averred and the answer admitted the expenditure by the United States of money in the improvement of the Calumet River.

The bill averred and the answer admitted that on November 28, 1906, application was made by the defendant to the Secretary of War for a permit to reverse the flow of the Calumet River and to divert water through it from Lake Michigan; *that this application was refused by the Secretary of War on March 14, 1907*; that on September 18, 1907, the Board of Trustees of the defendant passed an order declaring that it intended to reverse the flow of the

Calumet River and to withdraw water from Lake Michigan through it for use in its channel *without the authorization of the Secretary of War*, unless the defendant was prevented by injunction from so doing. The bill alleged that it was the defendant's intention to divert 4,000 c. s. f. from Lake Michigan through the Calumet River and the answer admitted an intention to divert an amount from 2,000 to 4,000 c. s. f. (The diversion through this river having since been accomplished, we may now state that it at present amounts to 2,000 c. s. f. and that the channel is so constructed as to permit of an easy enlargement to 4,000 c. s. f.)

The bill alleged and the answer denied that the effect of this diversion would be to lower the level of Lake Michigan and its connecting rivers, channels, and harbors and to modify the condition and obstruct the navigable capacity of the said navigable waters of the United States. The bill alleged that there was neither an Act of Congress nor an authorization of the Secretary of War for the withdrawal of the water. *The answer denied that Section 10 of the Act of March 3, 1899, was of any binding force on the defendant and challenged the power of the Federal government to interfere with the proposed diversion.*

The answer thereupon proceeded to assert three affirmative defenses, which as will readily be seen, are the defenses upon which it places its chief reliance on this appeal:

(1) Congress, by the Acts of March 30, 1822 (3 St. at L. 659), and March 2, 1827 (4 St. at L. 234),

relating to a grant of land to aid the state of Illinois in the construction of the Illinois and Michigan Canal, conferred upon the state of Illinois an authority broad enough to include the diversion of water from Lake Michigan for the purposes of the Sanitary & Ship Canal. (It may be noted that these Acts were passed before the City of Chicago even existed.)

(2) That the water to be withdrawn from Lake Michigan was to be used for sanitary purposes, including the prevention of the pollution of the drinking water of Chicago; that the withdrawal was part of a general plan of sanitation of which the central feature was the Main Channel of the Sanitary District Canal with which the Calumet Channel was to be connected, and in view of the proposed use for the purposes of sanitation the withdrawal of the water was beyond the control of the Federal government, being comprised within the police power of the state.

(3) That the proposed work was in the interest of navigation; that the canal might be used as a part of a system of waterways connecting Lake Michigan with the Mississippi River and was therefore in harmony with the policy of both Federal and State governments to provide a navigable waterway between the Great Lakes and the Mississippi River.

On June 25, 1908, the complainant filed exceptions to the answer presenting the point that the three affirmative defenses were not admissible in this litigation. These exceptions were overruled on June 26, 1908, and, issue being joined by replication filed

on that day, the complainant proceeded to take evidence before a commissioner appointed by the court for that purpose.

The evidence of the complainant, which was directed to the questions of the effect of the diversion of the water upon the navigable capacity of the lakes and their connecting waters and the resulting injury to the interests of navigation, was concluded July 8, 1909. (Rec. Vol. I, pp. 428-445.) The defendant, instead of immediately attempting to meet the testimony of the United States on those points, again opened negotiations with the Department of War, and on June 27, 1910 (Rec. Vol. VII, p. 27), made application to the Secretary of War to open a channel from the Calumet River to its existing Main Channel so as to substitute two routes instead of one between Lake Michigan and its canal. On June 30, 1910, the Secretary of War granted a permit (see *infra*, p. 58) which in substance provided that, *subject to the control of the Secretary of War and his right to revoke the permit at will*, the Sanitary District might withdraw from Lake Michigan through the Chicago and Calumet Rivers together the same total quantity of water which it was then authorized to withdraw from the Chicago River, namely, 4167, c. s. f. It was further expressly provided that this permission by the Government should not affect in any way the friendly suit to determine the right of the Sanitary District to divert from Lake Michigan for sanitary purposes water in excess of the amount authorized by the

Secretary of War. This stipulation as to the pending litigation was observed by the defendant *and no amendment of the pleadings in the Calumet River suit has been made.* The issues upon the record are precisely as they were prior to the permit of June 30, 1910, and the case stands exactly as if the permit had not been granted. Nevertheless, in the face of the conditions of this permit, the defendant thereafter continued to maintain the position that it might reverse the flow of the Calumet River as a matter of right against the prohibition of the Secretary of War, and that it is entitled to withdraw water in an unlimited quantity from Lake Michigan so long as it is required for purposes of sanitation.

As is apparent from the appellant's brief (p. 11) work in this canal, which was stopped when the bill of complaint in the Calumet River suit was filed in 1908, was resumed after June 30, 1910. Its construction was completed in 1922 and its capacity as now constructed is approximately 2,000 c. s. f. It reverses at practically all times the flow of the Calumet and Little Calumet Rivers. It is designed for further widening to provide a maximum capacity of 4,000 c. s. f. (Appellant's Brief pp. 11-12, 13.)

The defendant, having made this temporary arrangement with the Secretary of War (which by express agreement was not to affect the litigation then pending) proceeded to take the evidence of witnesses to establish the desirability of using the water for sanitary purposes and to show that while there were other efficient methods for the disposition

of the sewage of the Calumet District, the dilution method, which required the diversion of water from the lake, was the cheapest. The last of these witnesses was examined on June 1, 1911 (Rec. Vol. 1, p. 482). The defendant did not then attempt to produce evidence contradicting the complainant's case as to the effect of the diversion of the water upon the condition and navigable capacity of the lakes. Instead, on February 5, 1912 (Rec. Vol. VII, p. 6) the defendant applied to the Secretary of War for permission to withdraw from Lake Michigan through the Chicago and Calumet Rivers not to exceed 10,000 c. s. f., such permission to be revocable at any time by the Secretary of War, and subject to such action as Congress might take in the premises. This application was heard extensively by the Secretary of War *and on January 8, 1913, was denied.* (Rec. Vol. VII, p. 7.) During the month of January, 1913, the War Department learned that appellant was diverting more than 4,167 c. s. f. in defiance of the order of the Secretary of War. Appellant's attention was called to its acts by communications from the United States Engineer at Chicago, and appellant, through its attorney, Mr. Adcock, requested that its rights be determined by suit for an injunction. (Rec., Vol. VI, pp. 3968-3973.) On March 18, 1913, the defendant renewed the taking of its evidence. The hearings before the Commissioner, at which were examined witnesses for the defense, and those in rebuttal for the government, proceeded until June 10, 1914. By agreement, the evidence taken in the

Calumet River suit was to be used also in the Main Channel suit involving the withdrawal of water from Lake Michigan through the Chicago River in excess of the amount authorized by the Secretary of War.

B. Main Channel suit

The bill in this case was filed October 6, 1913 and grew out of the refusal of the defendant to comply with the decision of the Secretary of War with respect to the amount of water to be withdrawn from Lake Michigan. The defendant, having refused to comply with the ruling of the Secretary of War, and persisting in diverting an amount of water in excess of 4,167 c. s. f., the United States filed this suit to enforce obedience to the order. The bill sought, therefore, to prevent the defendant from withdrawing water from Lake Michigan in excess of 4,167 c. s. f. The answer of the defendant was filed on January 16, 1914. The issues presented by these pleadings may be summarized as follows:

The bill charges and the answer admits that the Chicago River is a navigable water of the United States and that the United States has spent large sums of money in improving it; that on May 8, 1889, the defendant applied to the Secretary of War for authority to divert water from the Chicago River into its canal, and that the making of the applications and the granting of permits had taken place from that time on, as was charged in the bill. (These applications, permits, etc. will not be set forth here, as they are discussed at length below, *infra*.)

pp. 37-67). They included, of course, the defendant's application of February 5, 1912 to increase the amount withdrawn through the Chicago and Calumet Rivers to 600,000 cubic feet per minute (10,000 c. s. f.) and the denial of this application on January 8, 1913. The bill alleged and the answer denied that the defendant had been withdrawing water from Lake Michigan in excess of 250,000 cubic feet per minute (4,167 c. s. f.) and that the effect of the withdrawal of an amount in excess of that authorized by the Secretary of War would be to modify the condition and obstruct the navigable capacity of the Great Lakes and their connecting channels and to modify the condition and capacity of the channel of the Chicago River and to inflict injury on the navigable interests of the United States.

In the remaining portion of the answer the defendant stated at length certain facts with reference to the history of its organization and the construction of the canal and reasserted the three affirmative defenses which it had set up in its answer in the Calumet River suit and on which it is now relying in this Court. These matters were, however, set up with considerable more detail. For example, the answer averred that unless the defendant was permitted to withdraw more than 4,167 c. s. f., it would be necessary for the city of Chicago to reconstruct its system of sewers at a cost of more than \$100,000,000 and to maintain it at an expense which when capitalized would represent in the aggregate an investment of \$240,000,000; that the sum of

\$82,000,000 already spent by the defendant would be practically wasted. The answer also contained allegations of details to the effect that Congress had at various times appropriated money for the improvement of the Illinois River and for the purpose of investigating waterway projects connecting Lake Michigan with the Mississippi River, and from those acts of Congress the defendant suggested as a defense an implied authority to withdraw water from Lake Michigan without the express authorization of Congress and in defiance of the decision of the Secretary of War. Out of these allegations and others as to government projects for improving navigation between Lake Michigan and the Mississippi River (never authorized by Congress or approved by the Department of War) the defendant attempted to create a claim of laches, acquiescence, and implied approval on the part of the United States with respect to the construction of the canal. There were also allegations claiming an estoppel by reason of the institution of the suit by the government to compel the removal of the dam of the Economy Light & Power Company in the Desplaines River at Dresden Heights, Illinois, but this seems to have been abandoned, at least on this appeal, as an element of estoppel.

On February 28, 1914, the complainant filed its motion to strike all of the answer setting up these three affirmative defenses on the ground that none of the matters thus set forth constitute admissible de-

fenses in this case. As has already been stated, this motion was pending throughout the proceedings until the entry of the final decree by Judge Carpenter on June 18, 1923, and this decree was intended to be, and was understood by the parties to sustain the complainant's motion. By agreement, the evidence which had been taken in the Calumet River suit was to be used in this, the Main Channel suit, so far as applicable, with the same effect as if the commissioner had been designated and had taken testimony in the latter case. Further testimony was taken up to the month of December, 1914. Shortly thereafter, the case was submitted to Judge Landis on the record as made (including Volumes I to VII of the record now before this Court which have been rebound for the purpose of this appeal) and on the motion of the complainant.

C. Decision of Trial Court

The efforts of the Government to bring the case to an early conclusion and a final decree establishing its rights are partially revealed by the record. (Rec., Vol. II, pp. 3878-3880.)

Judge Landis kept the case under advisement for over six years, his reasons for the delay being set forth in the oral opinion which he finally rendered on June 19, 1920. (Rec. Vol. VIII, p. 149.) The pendency of the war, his understanding that there was a possibility of a compromise, and his indisposition as a citizen of Chicago to have microbes in his drinking water, were his assigned reasons. Judge Landis in effect found:

(1) That there was a substantial lowering of the surface of the Great Lakes by reason of the unauthorized diversion of water, together with a changing of the current of the Chicago River;

(2) That this lowering of the level constituted a creation of an obstruction to the navigable capacity of the Great Lakes, particularly with respect to the proof showing the depth of the harbors of the Great Lakes;

(3) That the power of Congress with respect to navigable waters having been exercised was paramount, and therefore the affirmative defenses relied on by the defendant were not admissible;

(4) That there should be an order striking those portions of the defendant's answer setting up the affirmative defenses;

(5) That an injunction should issue, its operation to be suspended for thirty days after the beginning of the next session of the Supreme Court of the United States.

On July 12, 1920, the defendant made a peculiar motion—that the court “reconsider its oral opinion and oral direction heretofore announced concerning the form of decree to be entered in said causes.” In effect the motion asked that the decree enjoin the defendant only from diverting from Lake Michigan *more than 10,000 c. s. f.* on condition that if Congress or other competent governmental authority should provide for the construction in the St. Clair, Niagara, or St. Lawrence Rivers of works to compensate for any diminishing levels of the Great Lakes due to the

defendant's diversion, then the defendant should defray the expense and pay the cost of construction and maintenance of any such works upon request therefor by the United States. In connection with the motion the defendant offered and agreed to defray the expense, or to pay to the United States upon demand the cost of the construction and maintenance of such works in accordance with an ordinance which the defendant had passed on July 8, 1920. Certain portions of the record and testimony previously taken in the cause were cited in support of the motion.

The motion was later amended by averments to the effect that the defendant had passed an ordinance providing for supplementing the works already constructed by a program for the construction and operation of works for the purification of sewage so that within a period of twenty-five years such purification works should be constructed and in operation and that the amount of sewage and waste so passing into the Desplaines River should be at least 50 per cent less than that passing at the time of the motion. The amendment also averred the passage of a statute by the legislature of Illinois authorizing the defendant to construct the works and carry out the program for sewage purification, as set forth in the ordinance.

Judge Landis resigned his position as judge on March 1, 1922, without entering any final order or decree. Thereafter the case was assigned to Judge Carpenter. On April 25, 1923, further testimony

was taken in behalf of the defendant before a commissioner. (Rec. Vol. VIII, pp. 175-223.) It was all received subject to the objection of the complainant and had to do with matters within the scope of the second affirmative defense of the defendant. It purported to show the cost of other methods of disposition of sewage and the time it would take to accommodate the works then constructed and any new system to the needs of the probable population of Chicago. There was also testimony to the effect that under the law of the State of Illinois the revenue that would be received by the defendant would not meet the probable expenses until the year 1945.

On June 18, 1923, Judge Carpenter entered an order denying the defendant's motion and refusing its offer. On the same day, Judge Carpenter entered a final decree enjoining the defendant from diverting or abstracting any waters from Lake Michigan in excess of 250,000 cubic feet per minute. The opinion of Judge Carpenter (Rec. Vol. VIII, p. 127) in substance adopts the opinion of Judge Landis as to the points in issue.

II

A review of the efforts of the appellant to obtain permission from the Federal Government to withdraw water from Lake Michigan, showing that there is no foundation in fact for the claim of invitation, acquiescence, and laches made by the appellant.

We do not believe that appellant's Statement of the Case affords to this Court a sufficiently clear account of what transpired between the appellant

and the Federal authorities in connection with the unauthorized diversion of water from Lake Michigan. Throughout appellant's brief counsel for appellants have seen fit to substitute their own (and we believe unjustified) interpretation of official documents for the actual language of the documents. They have also ascribed purposes and intentions, particularly to the Secretary of War, for which there is no basis in the documents or elsewhere in the record. Inasmuch as these instruments speak for themselves, we shall now discuss them in chronological order:

A. The enabling act of the Illinois legislature, passed May 29, 1889

The statute under which the appellant was organized and which, together with certain amendments, is the source of its powers and duties, was enacted by the Illinois legislature on May 29, 1889, and is entitled, "An Act to create sanitary districts and to remove obstructions in the Desplaines and Illinois rivers." The Act is general in its terms and provides a method for the incorporation of municipal corporations in Illinois with authority to make provision for the drainage of the incorporated territory. We need not dwell on those portions of the statute having to do with the general powers of such corporations (see Rec. Vol. IV, p. 2327). The portions of the statute which are of chief interest to this case are found in Sections 20 and 23. These sections by explicit language contemplate the construction of a canal diverting water from Lake Michigan into the Desplaines or

Illinois River and require that it be constructed of sufficient size and capacity to maintain a continuous flow of not less than 800,000 cubic feet per minute (5,000 c. s. f.). They further require that if the population of the district draining into such channel should at any time exceed 1,500,000, the channel should be made and kept of such size that it will produce and maintain at all times an additional flow of not less than 20,000 cubic feet of water per minute for each 100,000 of the population of the district. It is manifest, therefore, that this statute requires the appellant not merely to take 10,000 c. s. f. (600,000 cubic feet per minute) but requires the appellant to take a considerable amount in excess of that for each 100,000 of population over Chicago's present population of 3,000,000. The purpose indicated by the statute, therefore, and confirmed by the acts of the appellant, as well as by its contentions that it is justified by consideration of the police power, is evidently to take an *unlimited* amount of water in defiance of any acts of Congress or rulings of the Secretary of War. As the population of the district increases nearly 70,000 a year, it thus asserts the right to augment annually its present unauthorized diversion of water to the extent of approximately 15,000 cubic feet per minute. Even were the appellant limited to 10,000 c. s. f., it would on its own admissions be violating the requirements of Sections 20 and 23 of the statute from which it derives its existence and power, and those sections would be at least partially invalid.

B. Condition of Federal law as to control of navigable waters at the time of the passage of the Illinois enabling act of May 29, 1889

At this time (1889) there was no general Federal statute with respect to the control of navigable waters. As is shown under our Point II (*infra*, p. 136) this Court had held that, as to modifications and improvements the effect of which was entirely within the boundaries of a state on navigable waters wholly therein, Congress had left the states free to act, their action being subject to what Congress might do when it saw fit to assume control. As to acts which were national or international in their scope or effect—and the navigability of the Great Lakes is of this character—the failure of Congress to legislate was, under the well established principle, an expression of its will that the subject should be free from restrictions or impositions by the state.

The diversion of such a large quantity of water from Lake Michigan with its consequent effect on the levels of the Great Lakes was a subject both national and international in its scope, and the silence of Congress did not give to the state of Illinois the right to create what was in fact a large navigable river flowing away from Lake Michigan and a very appreciable obstacle to the navigable capacity of Lake Michigan and the other Great Lakes.

C. The Federal Act of September 19, 1890

During the year following that in which the Sanitary District enabling act was passed, Congress

enacted a general law for the protection of the navigable waters of the United States. By Section 10 of the River and Harbor Appropriation Act of September 19, 1890, Ch. 907, 26 Stat. 454, it was provided—

that the creation of any obstruction, not affirmatively authorized by law, to the navigable capacity of any waters, in respect to which the United States has jurisdiction, is hereby prohibited.

By Section 7 of the same Act it was made unlawful—

to excavate or fill, or in any manner to alter or modify the course, location, condition, or capacity * * * of the channel of said navigable water of the United States, unless approved and authorized by the Secretary of War.

Thus it was made necessary, before modifying the condition or capacity of the navigable waters of the United States, to obtain the authorization of the Secretary of War.

As to the preliminary authority of law required in the case of an obstruction of a navigable water wholly within the boundaries of a state, this Court decided in the year 1899 in the case of *United States v. Bellingham Bay Boom Company*, 176 U. S. 211, that such authority might be conferred either by a law of Congress or by a law of the state passed before Congress had itself legislated upon the subject.

D. Organization of Sanitary District and preliminary work on the canal

The incorporation of the appellant was completed by a vote of the people in November, 1889 and its first Board of Trustees was elected in December, 1889. Nothing, however, was done with respect to the construction of a canal prior to the passage of the Act of Congress of September 19, 1890. Several years thereafter were spent in consideration of routes for the canal and estimates of the cost of construction. Plans for the canal were finally agreed upon and bids upon certain propositions were received on June 8, 1892. (Rec. Vol. IV, p. 2363.) The actual construction was not undertaken until 1893. Therefore, all work was done after Congress had provided that such work must have the affirmative approval of the Secretary of War.

E. Suggestions of Federal aid in construction of canal

From the very beginning, the relation of the proposed canal to the Federal government was the subject of consideration by both the state and federal authorities. The government engineers had been at work for many years upon plans for the improvement of the navigable waters connecting Lake Michigan with the Mississippi River, and when the Sanitary District Canal was first projected there were suggestions by those connected with the Sanitary District and by the office of the Chief of Engineers, that, in the construction of the canal, there should be cooperation on the part of the local

and federal authorities, and that the United States should contribute something toward the expense of building the canal. (See Rec. Vol. IV, p. 2362-3; 2172-4.) Nothing came of such proposals, however, and Congress granted no aid whatever for the construction of the canal.

F. Early assertion of Federal control with respect to obstructions to navigation

So far, however, as the construction of the canal involved any modification of the capacity or condition of any navigable waters of the United States, the federal authorities were prompt in asserting their paramount authority. For example, as early as August 24, 1892, before any actual work of construction had been undertaken, Capt. W. L. Marshall, United States Engineer at Chicago, sent to appellant's Board of Trustees a communication containing the following:

The matter of Federal cooperation with you must necessarily soon come up, but I can readily see that you may prefer to bring it up as a distinct proposition. (Rec. Vol. IV, p. 2377.)

On May 23, 1893, Capt. Marshall sent a communication to the president of appellant's Board of Trustees which contained the following:

As far as the obstructions to navigation in Chicago River are concerned, we will deal with them under United States laws, but in case these laws are silent, or where questions arise where under these laws things may be

done that may not be done under state and local laws, the custom of this office has always been to respectfully suggest to the Secretary of War that no action be taken until the local authorities expressed their assent, and that in no case should a permit be granted by the War Department until it be shown that the authorities of the State of Illinois expressed their concurrence in such action. (Rec. Vol. IV, p. 2378.)

In Capt. Marshall's report dated August 9, 1893 (contained in the report of the Chief of Engineers, 1893), there appears the following:

Without criticizing in any way the local measures taken for local relief, it may be said that the state laws, if effectively executed for the purposes specified, seemingly require changes in the capacity of Chicago River and its branches that may increase, may diminish, or may even entirely destroy their value for commercial purposes. In any case under existing laws, no alteration in the capacity of Chicago River can be made without the consent of the Secretary of War, or without full examination by agencies established by Congress, and the execution of the state laws are therefore limited by superior authority. (Rec. Vol. IV, p. 2368.)

On March 22, 1895, Col. Poe, United States Engineer at Chicago, sent to the appellant's Board of Trustees a communication which was as follows:

The Board of Engineers appointed by direction of the Secretary of War to consider and report upon "the probable effect of the opera-

tion of the Chicago Drainage Canal upon the lake and harbor levels and upon the navigation of the Great Lakes and their connecting waterways" would be pleased to receive from your Honorable Board of Trustees any information or data bearing upon the subject submitted to us, and especially the following:

First. *The conclusions arrived at from investigations made by your authority or by others as to the effects upon the levels of the great lakes by the operation of your Canal, including any mathematical analyses and discussions of the question from which these conclusions have been arrived at.*

* * * * *

Third. Whether any part of the inner harbor of Chicago, which includes Chicago River and its branches, will be utilized as part of the proposed Canal, and if so what amount of water you propose to take through these river channels.

* * * * *

In making these inquiries, the Board of Engineers consider that your Honorable Body is much interested in the solution of the questions submitted to us, and therefore desirous to aid as far as practicable in arriving at correct conclusions. (Rec. Vol. IV, p. 2380-1.)

The appointment of the Board of Engineers referred to in the foregoing letter followed the observations published in the Chief of Engineer's report for 1898 which indicated a lowering of the surface levels

of Lake Erie of approximately $5\frac{1}{4}$ " for a diversion of 10,000 c. s. f. at Chicago.

The Chief of Engineer's report for 1893 contains a statement to the effect that the city of Chicago expects to turn into the channel of the Illinois River at some future time 5,000 c. s. f. of Lake Michigan water and at some more remote period 10,000 c. s. f., but not probably within a generation. (Rec. Vol. IV, p. 2373.)

The Board of Engineers mentioned in Col. Poe's letter of May 22, 1895, made its report on August 16th of that year. In this report we find the following:

It is true there is nothing showing that the consent of Congress had been asked for this enterprise. Certain that the subject had not been treated as an Inter-State affair; to say nothing of its being an International affair.

* * * * *

But it is sufficient to say that all that is now changed. The adopted policy is to defend, as well as improve all water courses, now navigable, or probably navigable in the reasonably close future. Waterways are under the charge of the United States, and there is no likelihood of their being abandoned for some time to come. * * *

The abstraction of 10,000 cubic feet of water per second from Lake Michigan will lower the levels of all the lakes of the system except Lake Superior and reduce the navigable capacities of all harbors and shallows throughout the system to an extent that may be determined,

if at all, by actual measurements only. Under the laws of the United States *these changes in capacity can not be made without Federal authority*, and to enable the executive officers of the United States to act advisedly in the matter it is necessary in the opinion of the Board not only that these measurements be taken, but that the money cost of restoring the navigable depths in channels and harbors be carefully estimated. (Rec. Vol. VI, p. 3936-39.)

At the very outset, therefore, we find that the United States asserted its paramount control with respect to the creation of obstructions to navigable waters. Indeed, shortly after the actual work of construction was begun, the Department of War put squarely up to the appellant the effect of the operation of this canal upon lake and harbor levels and upon the navigation of the Great Lakes and their connecting rivers.

G. Permit of July 3, 1896, and proceedings with reference thereto

If there were any doubt that the question of the effect of the diversion of water upon lake levels was under consideration by both parties from the very beginning and that the paramount control of the United States was asserted on its part and conceded by the local authorities, an end is put to that doubt by correspondence relating to the permit of July 3, 1896, to make certain changes in the capacity of the channel of the Chicago River.

On June 16, 1896, the president of appellant's Board of Trustees wrote to the Secretary of War, from which we quote the following:

The work of the Sanitary District of Chicago has progressed so far that it is now necessary for us to enter upon that which must be done in the Chicago River to make available the artificial channel which we have under construction from Robey Street, Chicago, to Lockport in Will County, twenty-eight miles distant.

Our connection with Lake Michigan must be through the Chicago River with the West Fork of the South Branch of which we make a junction at Robey Street. We send herewith a map showing in a general way our plans for improving the Chicago River by widening and deepening at the points indicated thereon by red hatchings and by figures which refer to explanations given in the legend on the map.

* * * * *

We ask your permission to proceed with the work upon the lines indicated and so far as is consistent with propriety the cooperation of the United States Engineering Department. (Rec. Vol. VI, pp. 3572-3.)

On June 24, 1896, Major Marshall of the Corps of Engineers at Chicago, wrote to the Chief of Engineers at Washington, saying among other things:

As far as the work itself is concerned there can be no objection to it, as in every case the

navigable channel of Chicago River will be improved, and at this stage I am unable to do otherwise than to recommend the granting of the authority sought.

The question that must come up later for the action of the War Department, to wit: Whether the improved channel of Chicago River will be sufficient to carry 300,000 cubic feet of water per minute without lessening or destroying the navigability of Chicago River, or whether the City of Chicago will be allowed by the United States and Great Britain to take any water at all from the Great Lakes, with the inevitable result of lowering their levels is not now under investigation, and is one that will not probably be settled or decided by executive officers. It is or may rather be considered an international question. (Rec. Vol. VI, p. 3573.)

Major Marshall went on to recommend that the necessary authority be granted under five conditions, the second and third of which were as follows:

(2) That this authority shall not be interpreted as approval of the plans of the Sanitary District of Chicago to introduce a current into Chicago River. This latter proposition must hereafter be submitted for consideration.

(3) That it will not cover obstructions to navigation by reason of this work while in progress, or when completed. (Rec. Vol. VI, p. 3574.)

On July 3, 1896, Acting Secretary of War Doe granted a permit to make the requested changes on

the conditions recommended by Major Marshall including the following:

(2) That the authority shall not be interpreted as approval of the plans of the Sanitary District of Chicago to introduce a current into Chicago River. This latter proposition must be hereafter submitted for consideration.

(3) That it will not cover obstructions to navigation by reason of this work while in progress or when completed. (Rec. Vol. VI, p. 3574.)

On October 28, 1897, the appellant applied for a permit to widen the Chicago River between Quincy and Harrison Streets. (Rec. Vol. VI, p. 3575.) In response to this application, the Secretary of War issued a permit which was subject to exactly the same conditions as the permit of July 3, 1896, and included the following:

(2) That this authority shall not be interpreted as approval of the plans of the Sanitary District of Chicago to introduce a current into Chicago River. This latter proposition must be hereafter submitted for consideration.

(3) That it will not cover obstructions to navigation by reason of this work while in progress, or when completed. (Rec. Vol. VI, p. 3576.)

On November 12, 1898, the appellant applied for a permit to build a cofferdam around the east side of the center pier of the Adams street bridge, on the Chicago River. This permit was granted on November 30, 1898. It recited, as did also the permit to

widen the Chicago River between Quincy and Harrison Streets, the Act of Congress making it unlawful to build structures of this kind or modify the condition of the navigable waters of the United States without the authority of the Secretary of War. (Rec. Vol. VI, pp. 3579-3581.)

On December 16, 1898, the appellant applied for a permit to remove bridges at the Taylor Street crossing and replace them with bridges of a different type. This permit was granted on January 13, 1899, and like its predecessors recited the paramount authority of the federal government in the premises. (Rec. Vol. VI, p. 3579-81.) A similar application was made by the appellant on February 27, 1899, and a similar permit issued by the Secretary of War on March 10, 1899, with respect to another bridge at Taylor Street. (Rec. Vol. VI, pp. 3584-5.) Similar application was made on April 26, 1899, for the construction of a cofferdam along the west side of the Chicago River, and on May 12, 1899, a permit was issued by the Secretary of War similar in form to the preceding ones, expressly reciting the authority of the War Department in the premises. (Rec. Vol. VI, pp. 3582-3583.)

H. The Federal Act of March 3, 1899

Before the completion of its channel by appellant and before any application had been made for the diversion of water from Lake Michigan, Congress changed the law relating to the control of navigable waters of the United States in certain important

respects. Obstruction of navigable waters wholly within the boundaries of the state authorized by the state legislature had been held to be "affirmatively authorized by law" (within the meaning of that phrase as it appeared in Section 10 of the Act of Congress of 1890) in the case of *United States v. Bellingham Bay Boom Company*, 176 U. S. 211. Among the changes made by the new Act of 1890 was the substitution of the words "affirmatively authorized by Congress" with the result that the new Act prohibited the creation of any obstructions without the authorization of Congress. Section 10, with which the present suits are vitally concerned, has already been set forth (*supra*, p. 8) and is analyzed elsewhere (*infra*, p. 174). We may state here, however, that both analysis of the statute and the history of the legislation leads inevitably to the conclusion that it was the purpose of Congress, as expressed in the most sweeping language, not only to prohibit obstructions but also to forbid that there should be, after the passage of the Act of March 3, 1890, any alteration or modification of the course, location, condition or capacity of navigable waters of the United States without authority of the Department of War; that it was not necessary that such proposed alteration or modification should amount to an obstruction of the navigable capacity of the waters, but permission was required in all cases even though the proposed alteration or modification might amount to an increase, rather than a decrease, of the navigable capacity of the waters.

To invoke the statute it became necessary thereafter only to show that the proposed work does in fact amount to an alteration or modification of the course, location, condition or capacity of such navigable waters.

1. Application and permit for formal permission to open channel of the sanitary district to connect it with the Chicago River

It has already been noted that in the permits already issued by the Secretary of War the express reservation had been made—

That this authority shall not be interpreted as approval of the plans of the Sanitary District of Chicago to introduce a current into Chicago River. This latter proposition must be hereafter submitted for consideration.

There was the further reservation and condition—

That it (the permit) will not cover obstructions to navigation by reason of this work while in progress or when completed.

In the light of these conditions it is difficult to understand appellant's contention that these early permits, which were limited specifically to authority to make certain improvements in the channel of the Chicago River, are to be construed as any authority whatsoever to introduce a current into that river or to create any obstruction either in that river or elsewhere. That the appellant did not at that time so construe these permits is apparent from its application to the Secretary of War on April 22, 1899, *for permission to open the channel constructed by it as*

soon as it was completed. In connection with this application the appellant submitted to the Secretary of War a draft of permit which it requested be issued. This draft, after various recitals of work done by the appellant, contained further recitals specifically mentioning the permits of July 3, 1896 (in connection with which it recited "said approval being subject to limitations therein set forth"), and the other permits of November 16, 1897, November 30, 1898, January 13, 1899, and March 10, 1899. The draft also contained the following very significant admission:

Whereas, it is necessary, under the Act of Congress of September 19, 1890, that authority shall issue from the War Department under which the said Sanitary District may cause the waters of the Chicago river to flow to the west into the main channel of the said District. (Rec. Vol. VI. p. 3849.)

This application was referred to Major Marshall, United States Engineer in charge at Chicago. On April 24, 1899, Major Marshall reported to the Chief of Engineers (a portion of his report being quoted in appellant's brief, p. 39). Other portions of the report which appellant omitted to quote are the following:

It is a strange fact that this city has expended, or will expend, over \$30,000,000 *with the intention of diverting an apparently unlimited amount of water from the Great Lakes to the Mississippi drainage area for*

sanitary purposes, *without finding out whether such diversion would be allowed by the great interests of the United States and the Colonies of Great Britain along the chain of Great Lakes in the navigation of the rivers and harbors of the Great Lakes. Now they ask the authority of an executive officer of the United States to open a channel that will, to some unknown extent, lower the levels of all the Great Lakes below Lake Superior and of their outlets, introduce a current, also unknown, and not to be ascertained otherwise than by actual experiment, in Chicago river, the most important navigable river of its length on the Globe, but which is already obstructed by bridges, masses of masonry and bends, and of difficult navigation at best.*

The possible effects of this diversion are not known further than that to some unknown degree they will be injurious. Whether the amount of this injury will be so small as to be accepted by the interests affected, in view of the manifest advantages to and apparent necessities of their neighbors, cannot be determined by other than the interests themselves.

It is clear to me that I am not competent to make a recommendation as to what should ultimately and definitely be done. (Rec., Vol. VI, p. 8586.)

Major Marshall's report then discusses the probable effect of the opening of the channels on the levels of the Great Lakes and expresses his opinion that the abstraction of from 300,000 to 600,000 cubic feet per minute (5,000 c. s. f. to 10,000 c. s. f.) would permanently lower Lakes Michigan, Huron, and Erie

from three to eight inches, corresponding to an extreme reduction of from 160 to 466 tons in the carrying capacity of the large vessels of the lakes. Major Marshall further says:

But the State law is unlimited in its requirements. 20,000 cubic feet per minute must be taken from Lake Michigan for each 100,000 population of the district; already nearly 400,000 cubic feet must be taken, and at the same ratio of increase for a few decades, in a very short time there must be taken 1,000,000 cubic feet per minute under this indefinite law. *The amount should be limited and the injurious effect stopped somewhere.*

His report then discusses the uncertain results and dangers to navigation in the Chicago River by reason of the current to be introduced, suggests that the entire subject be referred to Congress for final solution, and that only a conditional permit or authority be granted to appellant upon the same conditions which the Secretary of War ultimately inserted in the permit which was granted. (Rec. Vol. VI, p. 3586; Appellant's Narrative, pp. 478-481.)

On May 8, 1899, the Secretary of War granted a permit to open the channel. After reciting portions of Section 10 of the Act of Congress of March 3, 1899, and the intention of the appellant to introduce a current into this canal of 800,000 cubic feet per minute, the permit certifies that—

the Secretary of War hereby gives permission to the said Sanitary District of Chicago to open the channel constructed and cause the water

of Chicago River to flow into the same, subject to the following conditions:

1. That it be distinctly understood that it is the intention of the Secretary of War to submit the questions connected with the work of the Sanitary District of Chicago to Congress for consideration and final action, and that this permit shall be subject to such action as may be taken by Congress.

2. That if, at any time, it become apparent that the current created by such drainage works in the south and main branches of Chicago river be unreasonably obstructive to navigation or injurious to property, the Secretary of War reserves the right to close said discharge through said channel or to modify it to such extent as may be demanded by navigation and property interests along said Chicago river and its south branch.

3. That the Sanitary District of Chicago must assume all responsibility for damages to property and navigation interests by reason of the introduction of a current in Chicago river. (Rec. Vol. VII, pp. 1-2.)

J. Permits of July 11, 1900

On July 11, 1900, in response to appellant's applications of April 26, 1900, and June 7, 1900, the Secretary of War granted permits to the appellant to make changes in the Chicago river near Lake Street, 12th Street, and Ashland Avenue. In view of the extreme assertions made in appellant's brief (without foundation in the record) as to the purpose and intent of these permits, we call specific attention to

the language of the permits which recite among other things that they do—

not in any way invalidate, waive or affect the right of the Secretary of War to regulate or revoke the permit granted under date of May 8, 1899, to the Sanitary District of Chicago, to divert the waters of the Chicago river and cause them to flow into the artificial channel. (Rec. Vol. VII, p. 43.)

These permits of July 11, 1900, then recited the conditions upon which the permit of May 8, 1899, was granted. There is nothing in the record to support appellant's frequent assertions that the Secretary of War gave any promise, or made any statement, or obligated the United States in any way, to increase the authorized diversion of water when the work under these permits of July 11, 1900, should be completed. The express recitals of the permits negative the inferences which appellant repeatedly states as matters of fact.

K. Modifications of permit of May 8, 1899

On April 9, 1901, the permit of May 8, 1899, was modified by the Secretary of War by directing the appellant to regulate the diversion from the river into the canal so that the maximum flow through the Chicago River and its south branch should not exceed 200,000 cubic feet per minute. The permit recited the second condition contained in the permit of May 8, 1899, and further recited that—

it is alleged by various commercial and navigation interests that the present discharge from

the river into the Drainage Canal sometimes exceeds three hundred thousand (300,000) cubic feet per minute, causing a velocity of nearly three (3) miles per hour, which greatly endangers navigation, in the present condition of the river. (Rec. Vol. VII, pp. 2-3.)

The appellant never questioned the authority of of the Secretary of War to make this modification, and, indeed, it could not, for it was clearly an exercise of the right expressly reserved in the original permit.

On July 23, 1901, the Secretary of War, in response to an application of appellant, made a further modification permitting a flow of 300,000 cubic feet per minute (5,000 c. s. f.) between the hours of 4 P. M. and 12 o'clock midnight—

which approval will be subject to revocation by the department in case the increase shall prove to be dangerous to navigation. (Rec. Vol. VII, p. 3.)

On December 5, 1901, in response to a further application of the appellant, the permit was again modified to permit the appellant to divert not exceeding 250,000 cubic feet per minute (4167 c. s. f.) throughout the twenty-four hours of the day upon the following conditions:

1. That this permission shall be in lieu of the present authorized rates of flow as stated above.

2. *That the permission herein given shall be subject to such modification as in the opinion of*

the Secretary of War the public interests may from time to time require.

8. That said Sanitary District of Chicago shall be responsible for all damages inflicted upon navigation interests by reason of the increase in flow herein authorized. (Rec. Vol. VII, pp. 4-5.)

This permit of December 5, 1901, again expressly recited the second condition contained in the original permit of May 8, 1899, and was clearly an exercise of the right of the Secretary of War reserved in that permit and the others which had followed it. The appellant never questioned the right of the Secretary of War to make the modification as, indeed, it could not.

On December 29, 1902, the appellant applied for a further modification so as to permit it to increase the flow to 350,000 cubic feet per minute during the closed season of navigation. The application stated, among other things:

We recognize your responsibility as the guardian of the interests of navigation. (Rec., Vol. VI, p. 3862.)

On January 17, 1903, an amended permit was issued by the Secretary of War giving the appellant permission to increase the flow from 250,000 to 350,000 cubic feet per minute until March 31, 1903—after which date it shall be reduced to 250,000 cubic feet per minute, as now authorized, upon the following conditions:

1. That the permission herein given shall be subject to such modification as in the opinion

of the Secretary of War the public interests may from time to time require.

2. That said Sanitary District of Chicago shall be responsible for all damages inflicted upon navigation interests by reason of the increase in flow herein authorized. (Rec., Vol. VII, pp. 5-6.)

This permit contained recitals calling attention to the original permit of May 8, 1899, and the permit of December 5, 1901, and particularly the condition contained in the latter permit—

that the permisston herein given shall be subject to such modification as in the opinion of the Secretary of War the public interests may from time to time require. (Rec. Vol. VII, p. 5.)

So far as the Main Channel is concerned, this permit was the last one granted and it is by its terms and by the terms of the permit of December 5, 1901, that the right of the appellant to divert water from Lake Michigan must be determined.

L. Amendment of May 14, 1903, by Illinois Legislature to enabling act of May 29, 1899

On May 14, 1903, the Illinois legislature passed a law enlarging the corporate limits of appellant so as to include what are known as the Calumet and North Shore Districts. The Act provided for the navigation of the channels created by the appellant and gave authority to construct dams, water wheels, and other works necessary to develop and render available the power arising from the water passing through its channels.

Section 27 of the Act provided for the building of the Calumet Canal, giving the appellant authority to construct a channel *across* the Illinois and Michigan Canal. Section 27 further required appellant to—

maintain the same proportion of dilution of sewage * * * as is now required by the Act creating said Sanitary District—

namely, 20,000 cubic feet per minute for each 100,000 inhabitants of a district. Section 27 further made provision for preventing any interference with the navigation of the Illinois and Michigan Canal by connecting the Main Channel of the Sanitary District with the upper basin of the Illinois and Michigan Canal at Joliet by a channel of specified dimensions equipped with the necessary locks. Sections 5 and 6 gave specific authority for the developing of water power and the conversion of such power into electrical energy and the sale and disposition of such energy to private persons or corporations. Section 8 of the Act provided:

The said Sanitary District shall, at the expense of said District, in all respects comply with the provisions of the acts of Congress of March 30, 1822, and March 2, 1827, as construed by the courts of last resort of the State of Illinois and of the United States, in relation to the Illinois and Michigan Canal, so far as it affects that portion of the Illinois and Michigan Canal vacated or abandoned by the terms of this Act.

**M. Findings of U. S. Lake Survey and International Waterways
Commission**

After the granting of the initial permit to the appellant to open its channel on May 8, 1899, the investigations for the purpose of determining the effect of the diversion upon the lake levels were continued by the United States Lake Survey.

On June 13, 1902 (32 Stat. 373), Congress passed a law providing for the formation of the International Waterways Commission, to be composed of three members from the United States and three from Canada. The duties of this commission were to investigate and report upon the conditions and uses of the waters adjacent to the boundary lines between the United States and Canada, including all of the waters of the lakes and rivers whose natural outlet is by the River St. Lawrence to the Atlantic Ocean; also upon the maintenance and regulation of suitable levels, and also upon the effect upon the shores of those waters and the structures thereon, and upon the interests of navigation, by reason of the diversion of these waters from or change in their natural flow; and further to report upon the necessary measures to regulate such diversion, and to make such recommendation for improvements and regulations as should best subserve the interests of navigation in those waters.

The report of the International Waterways Commission on January 4, 1907, is discussed elsewhere and its findings set forth (*infra*, p. 74). The findings of the commission as to the lowering of levels by a

diversion of 10,000 c. s. f. at Chicago were substantially the same as were established by the evidence in this case. The report of the commission concluded with certain recommendations, among which was the following:

The preservation of the levels of the Great Lakes is imperative. The interests of navigation in these waters is paramount, subject only to the right of use for domestic purposes, in which term is included necessary sanitary purposes.

* * * * *

A careful consideration of all the circumstances leads us to the conclusion that the diversion of 10,000 cubic feet per second through the Chicago river will, with proper treatment of the sewage from areas now sparsely occupied, provide for all the population which will ever be tributary to that river, and that the amount named will therefore suffice for the sanitary purposes of the city for all time. Incidentally it will provide for the largest navigable waterway from Lake Michigan to the Mississippi river which has been considered by Congress.

We therefore recommend that the Government of the United States prohibit the diversion of more than 10,000 cubic feet per second for the Chicago Drainage Cancl. (Rec. Vol. IV, pp. 2432-3.)

N. Decision of Secretary of War on application of Sanitary District to withdraw water through Calumet River

On November 28, 1906, the appellant applied to the Secretary of War for a permit to reverse the flow of

the Calumet River and to divert water from Lake Michigan through that river into a channel which it was to construct and which was to connect with its Main Channel. After the report of the International Waterways Commission on January 4, 1907, above mentioned, the Secretary of War on March 14, 1907, made his ruling, which was transmitted to the appellant. His communication recited Section 10 of the Act of Congress of March 3, 1899. It further recited that the question of whether the Chief of Engineers had power to recommend, or the Secretary of War to permit, such a change in the flow of a river had been submitted to the Judge Advocate General, who held that the case was one in which they had such power. The ruling further recited the recommendation of the Chief of Engineers which contained the following:

3. In my opinion, this abstraction will undoubtedly lower the levels of all the waters of the Great Lakes, except those of Lake Superior, and thus diminish the navigable capacity and depth of the various channels and harbors which have been deepened and improved under authority of Congress.

4. Leaving out Lake Superior, there are more than 100 works of river and harbor improvements on the Great Lakes and their connecting waters for which appropriations aggregating more than \$80,000,000.00 have been made. The application of this vast sum has resulted in securing and maintaining specified depths and widths of channel, which Congress

has decided to be required for the accommodation of the traffic using those waters.

5. To diminish these depths, even to a slight extent, would not only prove a serious injury to the traffic, but would practically undo the work which has been accomplished by Congressional direction, and necessitate the expenditure of further large sums of money for restoration. Any project that tends, in a measure, to annul or reverse the orders of Congress, as expressed in the various river and harbor acts appropriating funds for improving the harbors and channels connecting with the Great Lakes, should meet the disfavor of the Department, unless it has been sanctioned by that body. In my judgment such a project is the one under consideration, and for this reason I am unwilling to recommend favorable action thereon, assuming that the Department is empowered to take such action, as is held by the Judge Advocate General.

The communication of the Secretary of War then proceeded to state:

The decision of the Chief of Engineers and its final character has made it unnecessary for me to consider the merits of the question, but I may say this much, that the application for a change in the Calumet River is to be made the basis for the withdrawal of a large amount of water from Lake Michigan and that all interested in the enormous lake traffic view the settlement of the question with grave apprehension. Added to this, is the international complication which is likely to arise in the

threatened lowering of the lake level in the ports and harbors and canals of Canada. On the other hand, it is maintained with great emphasis and elaboration of detail that the change in the Calumet River is essential to the healthful sanitation of Chicago, and that the threatened injury to navigation is so small as to be negligible.

Between two such great interests, the decision must be affected more or less by large public policy and expediency, and while I agree in the construction of the Judge Advocate General that the issue is left by statutes to the recommendation of the Chief of Engineers, and the concurrent decision of the Secretary of War, it may be fortunate that circumstances now require submission of this question of capital and national importance to the Congress of the United States. (Rec. Vol. VII, pp. 23-25.)

O. Wilmette permit

On September 11, 1907, the Secretary of War, in response to application of the appellant on September 2, 1907, issued a permit authorizing appellant to connect Lake Michigan at Wilmette, Illinois, with the North branch of the Chicago River. This permit contained the following condition, among others:

That the total diversion of water from Lake Michigan through the Chicago river into the Illinois river shall be no greater than already authorized by past War Department permits. (Rec. Vol. VII, p. 26.)

P. The ordinance of the appellant asserting its independence of Federal control

As soon as it had obtained its permit for the construction of the Wilmette channel, subject to the limitation as to total diversion of water already mentioned, and while it was accepting the benefits of that permit and acting thereunder, the appellant proceeded on September 18, 1907, to pass an order declaring its intention to reverse the flow of the Calumet River and to divert water from Lake Michigan without the authority of the Secretary of War unless restrained by a court proceeding at the instance of the United States government. (Rec. Vol. VIII, p. 7.). The sole justification for its defiance of federal authority is to be found in the following recital contained in said order:

Whereas, This board is advised that it has the right and that it is its duty under the laws of the State of Illinois to construct its said channel and reverse the flow of said Calumet river, *notwithstanding the refusal of the Secretary of War to issue a permit authorizing the same*, for the purpose of furnishing the proper sanitary method of disposing of the sewage of the territory and inhabitants contiguous to the said proposed channel and within the corporate limits of the Sanitary District of Chicago, and *unless restrained by a court having jurisdiction of the subject matter at the instance of the United States Government*.

It should be noted that neither in this order nor at any time prior thereto was any claim made

that appellant had authority under the Acts of Congress of 1822 and 1827 relating to the Illinois and Michigan Canal. This idea was clearly an afterthought.

Q. The Calumet permit of June 30, 1910

Following the passage of appellant's order of September 18, 1907, the appellee filed the Calumet River suit on March 23, 1908, to enjoin the reversal of the flow of the Calumet River and the diversion of water through that river from Lake Michigan. After the complainant (appellee) had concluded the taking of its evidence showing the effect on the lake levels of the proposed diversion, the appellant on June 27, 1910, made another application to the Secretary of War for permission to open the channel through the Calumet River so as to substitute two routes instead of one between Lake Michigan and the Main Canal, *it being understood that the total quantity of water to be withdrawn from Lake Michigan was not to exceed that already authorized by the Secretary of War.* On June 30, 1910, the Secretary of War, acting upon this application, granted such a permit—

subject to all pertinent conditions of the existing permissions and to other express conditions as follows:

- (a) That it be distinctly understood that it is the intention of the Secretary of War to submit the questions connected with the work of The Sanitary District of Chicago to Congress for consideration and final action, and that

this permit shall be subject to such action as may be taken by Congress.

(b) That if, at any time, it become apparent that the current created by such drainage work in the Calumet, as well as Chicago rivers, be unreasonably obstructive to navigation, or injurious to property, the Secretary of War reserves the right to close the discharge through said channel or rivers, or to modify it to such an extent as may be demanded by navigation and property interests along said rivers.

(c) That The Sanitary District of Chicago must assume all responsibility for damages to property and navigation interests by reason of the introduction of a current in the Calumet as well as Chicago river.

(d) That the amount of water withdrawn from Lake Michigan, through the Chicago and Calumet rivers together, shall not exceed the total amount of 250,000 cubic feet per minute (4,167 cubic feet per second) already authorized to be withdrawn through the Chicago river alone.

(e) That the permission herein given shall be subject to such modification as in the opinion of the Secretary of War the public interests may from time to time require.

(f) That this permission shall in nowise affect or in any manner be used in the friendly suit now pending in the Circuit Court of the United States for the Northern District of Illinois brought by the United States of America against the Sanitary District of Chicago, to determine the right of the said

Sanitary District to divert from Lake Michigan for sanitary purposes an amount of water in excess of that now being diverted, without having first obtained a permit from the Secretary of War.

(g) That the War Department shall have free access at all times to the water-flow records of the Sanitary District of Chicago and free access also to the regulating works and all other parts of its canals for the purpose of checking records or making water-flow measurements.

(h) That the plans for the proposed work shall be submitted to and approved by the Chief of Engineers and the Secretary of War.

(i) That the work shall be subject to the supervision and approval of the Engineers Officer of the United States Army in charge of the locality. (Rec. Vol. VII, pp. 27-29.)

The recitals of the permit leave no doubt as to the reasons of the Secretary of War for his action. They show that—

So long as the water flow remains unchanged there seems to be no special objections to its extension to both rivers instead of confining it to a single one, especially since if the new (Calumet) route be developed later to a navigable state the double route will be advantageous to navigation interests.

R. Application of February 5, 1912

The appellant then proceeded to introduce certain evidence in the Calumet River suit as to the alleged necessity for using the water for sanitary purposes

(Rec. Vol. I, pp. 445-564), but no evidence as to the effect of the diversion upon lake levels was produced. On February 5, 1912, the appellant applied to the Secretary of War "for an enlargement" of the terms of the permit of May 8, 1899, as modified by the permits of December 5, 1901, and June 30, 1910. The application was for permission—

to withdraw from Lake Michigan through the Chicago river and Calumet river not to exceed 10,000 cubic feet of water per second; such permission to be revocable at any time by the Secretary of War, and subject to such action as the Congress of the United States may see fit to take in the premises. (Rec. Vol. VII, p. 7.)

There were extended hearings before the Secretary of War upon this application. (Rec. Vol. VI, pp. 3601-3845). It was stipulated in these cases that the proceedings before the Secretary of War are to be considered in evidence with like effect as if witnesses were called and original exhibits produced and identified herein. (Rec. Vol. VI, p. 3601.)

There was opposition to the granting of the permit on the part of members of Congress and other persons representing towns and cities in Minnesota, Michigan, Wisconsin, Ohio, and New York. The granting of the permit was also opposed by the representatives of various navigation interests of Chicago and property owners and residents throughout the entire Illinois valley. The opposition of the Chicago interests centered upon the effect of the increased flow in producing a current in the Chicago river which would

be extremely detrimental to navigation. (Rec. Vol. VI, p. 3616.)

Statements that the local situation was extremely critical; that even under the present flow navigation in the river was carried on at great hazard; and that any increase in the velocity of the current would mean disasters were made by the vessel owners and representatives of the Association of Lake Lines.

There was opposition to the granting of the permit on the part of representatives of the Canadian government as well as representatives of Canadian navigation interests. Briefs on behalf of the Canadian government were submitted in opposition to the application. (Rec. Vol. VI, pp. 3630-3631; 3711-3732.) The grounds urged in the briefs included the diminishing of the capacity of navigable waters of the United States and Canada and infliction of injury upon the navigation interests of Canada; also the terms of the Boundary Waters Treaty of January 11, 1909.

As to the effect of the withdrawal of the water on lake levels, the statement of the appellant, submitted by its attorney and its Chief Engineer, substantially admitted the correctness of the calculations as to the probable lowering of levels. (Rec. Vol. VI, pp. 3701-2.) See also the opinion of Lieut. Col. Zinn, Engineer in charge at Chicago. (Rec. Vol. VI, pp. 3732-3737.)

8. Decision of Secretary of War on January 8, 1913, denying appellant's application for increased diversion

After ample opportunity had been given to the appellant to be heard, the Secretary of War announced his finding on January 8, 1913. The document incorporating his findings is of some length and may be found set forth in full in the record. (Rec. Vol. VII, pp. 7-17.) We quote, however, portions of that document as follows:

It is clear that even under the conditions heretofore manifested on these applications the proposition to divert the waters of Lake Michigan into another watershed has not been entertained without hesitation and careful restriction by my predecessors. The propriety of obtaining congressional sanction for the project has been pointed out from the beginning; and the form in which the permit has been granted, even for the moderate amount of diversion permitted, has been so phrased as to indicate that the permission was predicated upon the absence of any substantial injury to commerce.

* * * * *

In the argument before me it was urged that the present canal represented the growth and development of a national policy expressed in two acts of Congress, 1822 and 1827, which authorized the construction of a canal "to connect the Illinois river with Lake Michigan," thus connecting the two watersheds. (Acts of Mar. 30, 1822, and Mar. 2, 1827.) But these statutes authorized a canal for the purpose of navigation and not sanitation. (Mis-

souri v. Illinois, 200 U. S. 526.) The Illinois and Michigan canal, actually constructed under their authority, derived its water for navigation purposes from the Calumet, Des-plaines, and Chicago rivers, and not from the lakes. And although in the latter part of its existence, it was used to a very slight extent to help purify the waters of the Chicago river and thus sanitize the city of Chicago, such a purpose could not have been dreamed of at the time its construction was authorized by Congress, 90 years ago. I can not see that its authorization and construction offer the slightest congressional sanction for the great canal now under discussion, which was not even contemplated until much more than half a century later. Even at the time when the present canal was constructed and opened it is very evident that its ultimate possible effect upon the navigation of the Great Lakes was not clearly realized by those interested in that navigation.

The Secretary of War then states his conclusion—

that the withdrawal of 10,000 cubic feet per second would substantially interfere with the navigable capacity of the Great Lakes and their connecting rivers,

and sets forth the amount of the reductions (*infra*, p. 72). Every argument now made by the appellant by way of affirmative defense was presented to and passed upon by the Secretary of War. He reached the conclusion that there would be substantial injury to the improvements effected by the United States and Canada in harbors and rivers on the Great Lakes

and that the proposed further diversion would be a violation of the Canadian Boundary Waters Treaty. He estimates the lowest careful estimate of "injury to American vessels alone at \$1,000,000 per year." He disposes of the argument that owing to the fact that the levels of the lakes vary on account of winds and change of barometric pressure by amounts even greater than the reduction, therefore the proposed reduction would be of no consequence. He calls attention to the fact that the demand for this diversion is based solely upon Chicago's needs for sanitation, there being involved in the case no issue of conflicting claims of navigation. According to the Chief of Engineers' report, so far as the needs of a deep waterway from the Great Lakes to the Mississippi are concerned:

The maximum amount of water to be diverted from Lake Michigan need actually be not over 1,000 feet per second,

a conclusion supported by other evidence cited by the Secretary of War. He points out the fact that "from the standpoint of navigation alone in such a waterway too great a diversion of water would be a distinct injury rather than a benefit." He expresses grave doubts as to whether under Sections 9 and 10 of the Act of Congress of 1899 the Secretary of War has any authority or discretion

to grant a permit which would inflict a substantial injury upon commerce in order to benefit sanitation.

He expresses the opinion that "no further diversion of water should be permitted at Chicago without the direct sanction of the Congress of the United States," saying:

I do not for one moment minimize the importance of preserving the health of the great City of Chicago; but when a method of doing this is proposed which will materially injure a most important class of the commerce of the Nation and which will also seriously affect the interests of a foreign power, it should not be done without the deliberate consideration and authority of the representatives of the entire Nation. The growth of Chicago is phenomenal and its representatives are quite unwilling to put any final limit to the demand which may be made upon the waters of Lake Michigan for its sanitation under the system now in use. I have before me the report of 1911 of the president of the sanitary district, in which he says:

"I am of the opinion that the presumption that our water supply is to be limited to 10,000 cubic feet per second, or 600,000 cubic feet per minute, is gratuitous and mischievous and should not be voiced by the officials of this district. I believe that we should have the volume requisite to our needs as they appear and are justified."

It is therefore quite conceivable that compliance with their sanitary needs according to this method of sanitation may eventually materially change this great natural water-course now existing through the lakes.

The considerations involved in the application the Secretary finds to be "broad questions of national policy." He then takes up the question of the sanitary needs of Chicago and expresses an opinion that the amount of water applied for is not necessary to a proper sanitation; at bottom the issue comes down to the question of cost; that there are other adequate systems of sewage disposal which are in use throughout the world including all the other cities on the Great Lakes. He says:

The evidence before me satisfies me that it would be possible in one of the several ways to at least so purify the sewage of Chicago as to require very much less water for its dilution than is now required by it in its unpurified condition.

* * * * *

It is manifest that so long as the city is permitted to increase the amount of water which it may take from the lakes, there will be a very strong temptation placed upon it to postpone a more scientific and possibly more expensive method of disposing of its sewage. *This is particularly true in view of the fact that by so doing it may still further diminish its expenses by utilizing the water diverted from the lakes for water power at Lockport.* But it must be remembered that for every unit of horsepower realized by this water at Lockport four units of similar horsepower would be produced at Niagara, where the natural conditions are so much more favorable.

The matter of restoration of the lake levels by compensated works is considered by the Secretary. He points out that—

such compensating works can only be constructed by the authority of Congress and at very considerable cost. It is not a matter which is in the hands of the Secretary of War. * * * Furthermore, in most cases such compensating works could only be constructed with the joint consent of our neighbor Canada, and consequently disposes of all arguments based upon the Boundary Waters Treaty, considerations of which lead him to the conclusion "that the question is not merely national but international." He states in this regard—

The establishment by formal treaty between the two countries of a tribunal with jurisdiction to decide just such questions seems to me to afford an additional reason against the assumption of jurisdiction to decide the question by an administrative officer of one of those countries.

In conclusion the Secretary of War sets forth his conclusions as follows:

First. That the diversion of 10,000 cubic feet per second from Lake Michigan, as applied for in this petition, would substantially interfere with the navigable capacity of the navigable waters in the Great Lakes and their connecting rivers.

Second. That that being so, it would not be appropriate for me, without express congressional sanction, to permit such a diversion.

however clearly demanded by the local interests of the sanitation of Chicago.

Third. That on the facts here presented no such case of local permanent necessity is made evident.

Fourth. That the provisions of the Canadian treaty for settlement by joint commission of "questions or matters of difference" between the United States and Canada offer a further reason why no administrative officer should authorize a further diversion of water manifestly so injurious to Canada against Canadian protest.

The prayer of the petition is therefore denied. (Rec. Vol. VII, p. 7-17.)

After this decision of the Secretary of War, which involves and passes upon substantially every contention now made by the appellant, it came to the attention of the War Department that appellant was diverting from Lake Michigan more water than was authorized by the permits then in force.

On February 24, 1913, acting under instructions from the War Department, the United States Engineer at Chicago wrote to appellant a letter which contained the following:

I am directed by the War Department to notify you that measurements made by the Engineer Department during January indicate that since the Secretary of War's decision of January 8, 1913, you have been diverting from Lake Michigan more water than the 4,167 second-feet authorized by the existing War Department permits.

Your attention is invited to Section 10 of the Act of March 3, 1899, which is being violated by such diversion, also to the provisions of Sections 12 and 17 of the same act, a marked copy of which is inclosed.

Kindly advise this office what steps, if any, you propose to take to keep future diversions within the limits of the existing War Department permits and how soon such reduction of diversion may be expected.

I have also to inform you that a continuation of the excess diversion may require action by the United States District Attorney. (Rec., Vol. VI, p. 3968.)

On February 27, 1913, the president of the appellant replied to the foregoing letter without complying with its request for information and stating merely that the letter would be taken up at the next meeting of appellant's board of trustees. (Rec., Vol. VI, p. 3969.)

On March 15, 1913, the United States Engineer at Chicago, again acting under instructions from the War Department, wrote a second letter, of the same tenor as the one above quoted. (Rec., Vol. VI, pp. 3969-70.)

Finally, on March 22, 1913, Mr. Adcock, attorney for the appellant (the same who is now appellant's attorney of record on this appeal), wrote at some length to the United States Engineer at Chicago in an attempt to justify appellant's action. In his letter he mentioned the pendency of the Calumet River suit and the defense of appellant that it was acting

under the reserved police power of the State for the preservation of the lives and health of its citizens. He further states:

You are no doubt aware that the International Waterways Commission by its report of 1907 recommended that no question be raised as to the right of the Sanitary District to flow through its channels for sanitary purposes *at least* 10,000 cubic feet of water per second. (Rec., Vol. VI, p. 3971.)

The inaccuracy of this statement is pointed out elsewhere (*infra*, p. 226), for counsel for appellant make the same misstatement in appellant's brief.

Mr. Adcock's letter proceeded as follows:

The Board of Trustees of the Sanitary District appreciate their responsibility in the matter. *It is their desire that the rights of the Sanitary District be finally determined.* With this in view, and inasmuch as the suit now pending relating to the Sag Channel involves issues which are somewhat similar to the questions now involved in the interrogatories propounded in your two letters, I respectfully suggest that the bill of complaint in the case of the *United States v. Sanitary District* now pending be amended or a supplemental bill filed so that all the issues above referred to may be settled and promptly adjudicated. A great deal of testimony has been already taken, all of which will apply to the issues that would be raised by the proposed amended proceedings. A great deal of time, work, and trouble would be saved by pursuing

the method I suggest and the Sanitary District will cooperate to speedily make up and try the issues upon the issues which may be presented by the amended or supplemental bill proposed, and will also stipulate that all testimony thus far taken be treated as having been taken in the amended proceeding. (Rec., Vol. VI, pp. 3972-73.)

In spite of this letter, appellant has seen fit to make the contention before this court that the appellee should not have proceeded by bill for injunction and that it was restricted to criminal proceedings against appellant and its officers. *It was by appellant's own request that suit for an injunction was instituted instead of criminal proceedings.*

As a result of the decision of the Secretary of War and of appellant's defiance of it, the Second or Main Channel suit was instituted.

Under our Point VIII (*infra*, p. 255), we shall deal further with the appellant's contention that the United States by acquiescence, laches, or implied authority has estopped itself from asserting its paramount control over navigation in the case of appellant.

III

Evidence as to the quantity of water now being withdrawn by the appellant from Lake Michigan and as to the amount it intends to withdraw in the future if its contentions are upheld

There is no dispute that the appellant is diverting at least 10,000 c. s. f. from Lake Michigan through its various channels. Owing to the fact that the

hearing of testimony on this subject was concluded in 1913, the record does not reveal the exact amount withdrawn since then. That it is at least 10,000 c. s. f., however, is apparent both from the allegations contained in the appellant's motion of July 12, 1920 (Rec. Vol. VIII, p. 152), from the assumed facts taken as the basis for the testimony taken in behalf of the appellant on April 25, 1923, and from admissions in the appellant's brief. This conclusion is supported by the fact that in 1923 the population of appellant's drainage district exceeded 3,142,000 (Rec. Vol. VIII, p. 217), which population would (under Sections 20 and 23 of the Illinois Act of 1889) require a diversion of about 10,500 c. s. f.

In fact, we are warranted in assuming that the appellant is regularly diverting 12,000 c. s. f. The Calumet Sag Canal was not completed until 1922 and from that time on had and has a capacity of 2,000 c. s. f. (to be increased later to 4,000 c. s. f.). According to appellant's admissions in its brief (pp. 13-14) it is at present withdrawing 6,250 c. s. f. through the main channel of the Chicago River, 1,750 c. s. f. through the North Branch of the Chicago River (1,000 at Wilmette and 750 through the Lawrence Avenue conduit), and 2,000 c. s. f. through the 39th Street conduit—a total of 10,000 c. s. f. (Appellant's Narrative, p. 191). That this is the actual truth is confirmed by appellant's frequent reiterations that 10,000 c. s. f. is the amount of the maximum or flood run-off of the Chicago River Basin (not the "Chicago River Drainage Area" as

appellant states, Appellant's Brief, p. 6—see Appellant's Narrative, p. 189). Incidentally, appellant does not explain how it was able to manage with a diversion of considerably *less* than 10,000 c. s. f. up to and including 1913, nor how it avoids the supposed bad effect of a maximum run-off in the Calumet River Basin, where it amounts to over 15,700 c. s. f. (Appellant's Narrative, p. 520), nor what it does with the trade wastes (from the stockyards and tanneries) entering its canal from the sewers of Chicago, which "require as much water to dilute it as would be necessary to take care of the sewage of a million and a half people" (Appellant's Brief, pp. 78-79).

The average amount of water which was withdrawn by appellant from the opening of the canal until 1913, was, according to appellant's chief engineer, as follows:

	Cubic second feet
1900.....	4314
1901.....	4437
1902.....	4569
1903.....	5144
1904.....	5271
1905.....	5381
1906.....	6292
1907.....	6444
1908.....	6506
1909.....	6970
1910.....	7132
1911.....	7295
1912.....	7458
1913.....	7619

(Rec. Vol. III, p. 1618.)

The report of the International Waterways Commission of January 8, 1910, shows that prior to that

time appellant refused to give that Commission information as to the amount of water it was diverting. (Rec. Vol. VII, p. 253.)

As evidence of the amount of water which appellant proposes to divert in the future, we cite the testimony of appellant's witnesses as to the probable future population of Chicago, keeping in mind the Illinois statutory requirement of amount of diversion per 100,000 of population:

	Human	Industrial equivalent	Total	Diversion in c. s. f.
1900.....	3,710,000	1,700,000	5,410,000	18,083
1940.....	4,425,000	1,900,000	6,325,000	21,083
1960.....	4,140,000	2,100,000	7,240,000	24,133
1980.....	5,800,000	2,300,000	8,100,000	27,300

(Rec. Vol. VIII, 217, Appellant's Narrative, p. 362.)

The magnitude of the proposed withdrawal can be appreciated when compared to the present flow of rivers tributary to the Great Lakes, and of connecting waters between the Great Lakes, as shown under our next subheading.

IV

The effect of the withdrawal of water from Lake Michigan upon the levels of the Great Lakes

(A) Comparison with other waters

For the purpose of convenient comparison we cite from the record evidence as to the mean annual flow of the following streams tributary to Lake Michigan:

	Cubic second-foot
Grand River.....	4,820
St. Joseph River.....	3,875
Fox River.....	3,870

(Rec. Vol. VII, pp. 402-3, 471-2.)

and of the following connecting waters between the Great Lakes:

	Cubic sec- ond-foot
St. Marys River.....	82, 000
Detroit River.....	204, 200
Niagara River.....	212, 000
St. Lawrence River (at its head).....	254, 400

(Rec. Vol. VII, p. 344.)

The appellant's diversion is, therefore, substantially equivalent to the combined flow of the three principal tributaries to Lake Michigan, and to five per cent of all the water contributed by the Superior, Michigan, Huron and Erie basins.

Even in the absence of testimony directly bearing on the effect of this diversion on the lake levels, this would seem sufficient to constitute such a modification of the condition of navigable waters of the United States as to require the recommendation of the Chief of Engineers and the authorization of the Secretary of War. Likewise, the great increase of waters emptied into the Desplaines and Illinois Rivers constitutes such a modification. *The appellant has created a large navigable river flowing away from the Great Lakes.*

(B) Decision of the Secretary of War on January 8, 1913

On January 8, 1913 the Secretary of War, in rendering his decision denying appellant's application for a permit to divert 10,000 c. s. f., found that the withdrawal of 10,000 c. s. f.—

would substantially interfere with the navigable capacity of the Great Lakes and their connecting waters. (See *supra*, p. 58.)

And that such a withdrawal would reduce levels as follows:

	Inches
Lakes Huron and Michigan.....	6.9
Lake St. Clair.....	6.0
Lake Erie.....	5.4
Lake Ontario.....	4.5
St. Lawrence River and Rapids Plat.....	4.8+

The Secretary of War further found:

This reduction would create substantial injury in all of the American harbors of the Great Lakes and in the St. Mary's, St. Clair, and Detroit rivers. It would produce equal injury in Canadian harbors on the Great Lakes, and a still greater injury on the lower St. Lawrence, the Canadian officials claiming a probable lowering effect of 12 inches at Montreal at low water. (Rec. Vol. VII, p. 10-11.)

This finding is entitled to great weight in this case; in fact, we maintain that the appellant will not be heard to contradict it. It was made in a proceeding which the appellant invited by its application for a permit to withdraw 10,000 cubic feet of water per second from Lake Michigan. The Government of Canada was represented at the hearing, and submitted its evidence. The Secretary of War had before him the reports of the Lake Survey and the International Waterways Commission, as well as the conclusions of the Chief of Engineers, whose statutory authority in passing upon the application was, as stated in the finding, concurrent with and independent of that of the Secretary of War. The principal expert witness for the appellant, Gardner S. Williams, upon whose

criticisms of the work of the government engineers the appellant is relying in this case, had commenced his work in the case more than three years prior to the hearing before the Secretary of War. None of his criticisms or conclusions were submitted to the Secretary of War. On the contrary, the Chief Engineer for the Sanitary District (Rec. Vol. VI, p. 8701) expressly stated that he did not wish "*to question the accuracy of the figures or the fairness of the calculations.*" Here was a controversy which involved the relations between this nation and Canada; a controversy in which a finding was to be made as to the right of a foreign government. The appellant presented its case, and upon this vital question of the effect of the diversion of the water on the lake levels it produced no evidence to contradict the conclusions of the government engineers. Having invited the hearing, it permitted the Secretary of War to make a finding upon the assumption that it accepted the correctness of the methods used by the United States engineers.

We submit, therefore, that in this proceeding the appellant will not be heard "*to question the accuracy of the figures or the fairness of the calculations*" of the Government engineers as to the effect of the withdrawal of water from Lake Michigan upon the levels of the lakes.

The conclusions of the Secretary of War in his report and the contentions of the United States in this case, however, are sustained by the overwhelming weight of the evidence in this record.

(C) Official reports as to effect of diversion upon lake levels

Investigations begun in 1895 by a board of engineers appointed by the Secretary of War, carried on in 1898 by the Deep Waterways Commission, and then transferred to the United States Lake Survey in 1899 resulted in extensive observations on the St. Clair, Detroit, Niagara, and St. Lawrence Rivers (Rec. Vol. IV, pp. 2454-2493, 2380; Vol. VII, 258). The result of the work is summarized in the report of the International Waterways Commission, dated January 4, 1907, as follows:

* * * The amounts by which the mean level, as derived from observations of the last 46 years of the various waters will be lowered by a discharge of 10,000 and also by 14,000 cubic feet per second are given in the following table:

Location	Water level lowered by diversion at Chicago of—	
	10,000 cubic feet per second	14,000 cubic feet per second
	<i>Feet</i>	<i>Feet</i>
Lake Huron and Michigan.....	0.32	0.70
Lake St. Clair.....	.45	.64
Lake Erie.....	.45	.64
Lake Ontario.....	.35	.60
St. Lawrence River at Rapids Plat.....	.40	.80

The length of time required to produce this effect is about 5 years; about half of it will be produced at the end of 18 months. The above figures give the effect at average level; they are much more considerable during low-water periods. (Rec. Vol. IV, p. 2418-19.)

This report is signed (Rec. Vol. IV, p. 2433) by the three representatives from the United States and the three representatives from Canada.

General Ernst and Haskell, the two engineers who represented the United States on the Commission, and Wilson, Secretary of the American Section, testified as witnesses for the appellee in this case.

Subsequent to the report of the International Waterways Commission additional observations with reference to the Niagara river were made in 1907 and 1908. (Rec. Vol. II, p. 848.) Those observations check almost exactly with the measurements which had been made in 1899. (Rec. Vol. I, p. 254.) Additional observations were made for the St. Clair river in 1909. (Rec. Vol. I, p. 291.) On January 8, 1910, the International Waterways Commission made another report, in which were set forth its findings as to discharge *increments* of the river outlets of the Great Lakes System. (See Rec. Vol. VII, p. 294-5.)

According to this table (the increment being the difference in discharge corresponding to a difference in lake level of 1 foot) the withdrawal of 10,000 cubic feet of water per second from the lake produces a lowering of the level of Lakes Michigan and Huron of from 5.8 to 7.4 inches; of Lake St. Clair of from 5.9 to 6.5 inches; of Lake Erie of from 4.8 to 6.1 inches; and of Lake Ontario of from 4 to 4.5 inches. The lowering effect of the withdrawal changes with the elevation of the lakes; a given withdrawal produces a larger effect at times of low water than at times of high water. A consideration of this fact explains the

difference in the increments which have been deduced from different series of observations.

There is, also, in the record the statement of the Canadian representatives as to the effect of the withdrawal upon the levels of the Canadian waters. This statement sets forth their conclusions with respect to levels as follows:

Lake	Actual diversion	Loss of level, assumed diversion of—	
		10,000 c. s. f.	14,000 c. s. f.
	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>
Michigan-Huron.....	3.07	7.4	10.3
Erie.....	2.6	6.1	8.6
Ontario.....	1.9	4.5	6.3
Rapids Flat.....	2.8	6.8	9.6
Cornwall Canal.....	2.1	5.0	6.9
Coteau.....	2.2	5.4	7.5
Montreal.....	4.3	10.25	14.4
Lanoraie.....	2.2	5.4	7.6
Sorel.....	2.5	6.0	8.4

(Rec. Vol. VI, pp. 3039-3040.)

The facts with reference to this diversion are established by evidence as strong as can be produced in support of any engineering proposition.

This conclusion as to the effect of the diversion of water from Lake Michigan upon the lake levels has been so generally accepted by engineers that it has not been looked upon as a matter which was open to debate. While the statement as to the result has changed slightly as new observations and computations have been made, the range is a very narrow one, and the latest figures agree substantially with the earlier computations of the Government engineers. An excellent statement of the principle involved is

found in the report of Maj. Keller, dated August 13, 1903 (Rec. Vol. IV, p. 2603), as follows:

It seems hardly necessary to prove that if unaccompanied by works which will diminish the flow in the natural outlet, an artificial diversion caused by creating a new outlet for any body of water must lower its level below that which would have existed in the absence of the artificial outlet and diversion and that the amount of such lowering will depend upon the size of the new outlet and the volume thus diverted. Certainly the asserted lowering would hardly be questioned were the diversion at Chicago of volume, for instance, equal to that of the natural discharge at Port Huron. Familiar examples in proof of this might readily be multiplied, but one will suffice: Consider the case of a trough or fountain basin which receives a constant supply of water and from which the waste flows through a rectangular notch or cut in the rim, the maximum discharge capacity of the notch being slightly greater than the constant volume of water flowing into the trough or basin. As a result of the excess discharge capacity of the notch, the basin will never fill flush to the rim, but will reach and maintain some level of equilibrium slightly below the top, and the waste will then equal the constant supply. If now the size or cross section of the outlet is increased either by widening the first notch or by adding another one elsewhere in the rim, the volume of water outflowing will at once be increased and will then temporarily exceed the supply. The surface level

of the basin will therefore fall until it is so low as once more to bring supply and waste into equilibrium. It is plain that the difference between the new level of the basin and its former elevation is due to the additional notch and is dependent on its size or cross section. The same effects will follow even if the supply is variable, but it will, of course, be more difficult to demonstrate them directly.

See also the report of the Board of Engineers for Rivers and Harbors, of December 16, 1913. (Rec. Vol. IV, p. 2581.)

(D) Evidence sustaining the official reports

The official reports of the United States are sustained in this case by evidence of the highest order.

The expert witnesses for the United States, so far as the testimony deals with matters of an engineering nature, were men of recognized distinction in the engineering profession, or men who, by reason of specialized training in river hydraulics and hydrography were uniquely qualified adequately to solve the questions involved in this case.

We shall not take the time of this Court to set forth the qualifications and experience of these witnesses. An unsatisfactory and incomplete summary is contained in Appellant's Narrative (pp. 126-131), while the qualifications of appellant's witnesses are treated very elaborately. A full account will be found in the portions of the record there referred to.

That the diversion of water at Chicago in the Drainage Canal lowers the Great Lakes system from the foot of the rapids in St. Marys River to some point in the lower St. Lawrence River was not questioned by the engineering experts produced on behalf of the appellant, and there appears no serious questioning of this fact by the appellant in any of the evidence. The controversy is as to the measure of this lowering for a specific volume of diversion. The difference in the conclusions as to the measure of the lowering in the four Great Lakes concerned is as follows:

	Secretary of War, Jan. 8, 1913	Best evi- dence of appellee	Williams, appellant's witness principal
Lakes Michigan and Huron:	<i>Inches</i>	<i>Inches</i>	<i>Inches</i>
10,000 c. s. f.	6.9	6.0	4.1
14,000 c. s. f.	9.6	8.4	5.7
Lake Erie:			
10,000 c. s. f.	5.4	5.3	3.5
14,000 c. s. f.	7.6	7.7	4.9
Lake Ontario:			
10,000 c. s. f.	4.5	5.0	4.0
14,000 c. s. f.	6.3	7.0	5.5

It appears from these figures that for a diversion of 10,000 c. s. f., Mr. Williams' conclusions were that the lowerings would be substantially *two* inches less for Lakes Michigan-Huron and Erie and *one* inch less for Lake Ontario than the determination of the lowering by the United States Engineers. The controversy, then, is as to the correctness of the conclusions of the Secretary of War and the Government Engineers on the one hand, and those of the only witness for the appellant, who made an analysis of the data of the Government Engineers and reached conclusions

of his own. It should be added that Mr. Williams, in his conclusions, has the partial endorsement of appellant's witnesses, Frederic P. Stearns and John R. Freeman, and of vague generalizations by Lyman E. Cooley. In the analysis of the testimony, however, it will appear that the corroboration of these two engineers, well known in the profession, is of a superficial character, without adequate study of the data.

Appellant's expert testimony in the hydraulic phase of the case is mainly that of a single engineer.

The qualifications of this one engineer to criticize the many expert witnesses of the appellee will not bear close scrutiny. His conclusions were of a partisan character, determined for no other purpose than to contribute to the defense in this case. His failures on previous occasions in attempting to measure the flow of the American channel of the Detroit River, and to conduct discharge measurements on the St. Mary's River do not indicate either experience or expert knowledge. (Rec. Vol. II, pp. 769-780.)

An interesting sidelight is thrown upon Mr. Williams' testimony by the fact that he was a witness for the State of Missouri in the suit brought in this Court against the State of Illinois and appellant to restrain the drainage of sewage into the Illinois and Mississippi Rivers by appellant (200 U. S. 496). In that case Mr. Williams testified to the appalling effects which appellant's diversion and discharge of sewage at Chicago would have on the citizens of

Missouri. Mr. Williams testified, among other things, to the following:

The danger impending over the citizens of Missouri as the result of the discharge of the sewage of Chicago through the Drainage Canal into the waters of the Illinois River is a most fearful menace to the life and welfare, not only of the citizens of Missouri but of the citizens of other cities below the mouth of the Illinois River, leaving entirely out of consideration the question of typhoid fever. (Rec., Vol. II, p. 763.)

Mr. Williams was of the opinion that—

there would be great danger of the occurrence of an epidemic of anthrax, not only among the human inhabitants of the State of Missouri but also among the lower animals using the water. (Rec., Vol. II, p. 763.)

and that glanders and other vicious diseases would probably attack the inhabitants of the plaintiff State. Mr. Williams was so positive of his conclusions that he stated that it was—

almost a certainty that the germs of the disease would be communicated or transmitted to the water supply of the City of St. Louis and the consumers thereof (Rec., Vol. II, p. 765).

And that—

it would undoubtedly lead to an outbreak of Asiatic cholera in the City of St. Louis. (Rec., Vol. II, p. 765.)

See also further portions of his testimony. (Rec., Vol. II, pp. 766-768.)

Mr. Williams' information on the condition of the Niagara River at the International Bridge Section was the result of observations made from the car window while passing across the bridge on a railroad train. (Rec., Vol. II, p. 915.) His experience was almost exclusively with the measurement of very small streams. (Rec., Vol. II, pp. 781-782.)

Mr. Williams also served as an expert witness against the United States in the case in which the United States sought the condemnation of the water power at Sault Ste. Marie, the case of *United States v. Chandler-Dunbar Water Power Company*, 229 U. S. 53. It appears further that when Mr. Williams needed to have some discharge measurements made in the St. Lawrence River in connection with a water-power project he employed a Mr. Blanchard, who was assistant to Mr. Sabin on the St. Clair River, and who was in charge of the discharge measurements of the Detroit River, both under the United States Lake Survey.

The object of the hydraulic measurements on the Great Lakes, begun in 1898, had no bearing whatever on any controversy that might arise regarding the depletion of the Great Lakes system by reason of the diversions at Chicago.

An appreciation of the care in which the appellee's observations were made, of the effort and expense devoted to ascertaining the truth, and of the improbability of any material error can be appreciated only by a review of technical evidence to an extent that would be out of place in this brief. Little idea

of the processes of river measurement and of the inapplicability and shallowness of the appellant's criticisms of the methods employed by appellee's experts can be gained without an elaborate study of their testimony. (See particularly the testimony of Mr. Shenehon.)

Appellant, in criticizing the conclusions reached by appellee's witnesses, lays particular stress upon its claim that appellee's witnesses erred in assuming that a certain stage (or level) of the Lake at an estimated number of minutes before the time the discharge measurement was made was the stage that controlled the particular discharge at the time the measurement was made. (Appellant's brief, pp. 65-66.) In advancing this criticism, appellant's witness (and counsel for appellant) assumed that all ascending stages of the Lake were high stages and that all descending stages were low stages. The increment resulting from a low stage of the Lake was found to be less than the increment from a high stage; translated in terms of effect on the lake levels, a diversion of 10,000 c. s. f. results in a greater lowering when the lake is at a low stage than when it is at a high stage.

Appellant's assumption is without basis in the record or in fact. There are as many ascending stages of the lake at low elevations as there are descending stages; the same is true as to high elevations. For instance, if measurements happened to be taken when the elevation of the lake is rising,

even though it be approaching its highest point, and if, as appellant claims, appellee's witnesses were in error as to the time taken for the effect of the elevation to reach the measuring section, the discharge measurements would be too low. On the other hand, after the climax is reached and the elevation is going down, the discharge measurements at high elevations would, according to appellant, be too high. There were several hundred discharge measurements made. Just as many were made during descending stages as ascending stages, and any possible error pointed out by appellant is compensated by the opposite error at other times.

Appellant's brief (p. 66) also contains a very confusing and misleading statement as to assumptions made by appellee's witnesses with respect to the time in which the flow in appellant's canal would be changed throughout from 4,167 c. s. f. to 10,000 c. s. f. Two of the appellee's experts (Ray and Moore) made estimates as to this length of time. Appellant attempted to refute their testimony by tests made; and these tests permitted certain definite conclusions. One of these is that the appellant was attempting to create a flow of 10,000 c. s. f. through the full length of the canal by discharging 9,000 c. s. f., or a little more, at Lockport. Under these circumstances, it is not surprising that a long period of time was required to establish a flow of 10,000 c. s. f. (Rec., Vol. VI, pp. 3447-48, 3505; Rec., Vol. VII, pp. 789, 92.)

The inapplicability of appellant's canal test to the rivers of the Great Lakes may be seen at a glance from the following comparison:

First, the change in flow in the Niagara River, for example, is caused by relatively small change in the lake at the *head* of the river. A hundred or more measurements were made when the water did not rise or fall more than two inches in an hour, and this meant a change of only about two per cent in the flow (Rec. Vol. II, pp. 848-51; Vol. VII, pp. 149-53.)

Second, the change of flow in appellant's canal was caused by sudden opening of gates at the *foot of the canal*, and the almost instantaneous change was from 4,000 to 9,000 c. s. f. or more. This was a change more than sixty times greater than the change in the river flow.

Mr. Shenehon's discussion of reservoir effect in the Niagara River indicates that the appellant's experts were fully cognizant of the hydraulic principles involved in variations of flow. (Rec. Vol. V, pp. 3172-76.)

In fact, these experiments made by appellant in its canal do not in any way disprove the determinations of the appellee's engineers. When the gates at appellant's power house at Lockport were open to the capacity of 9,000 to 10,000 c. s. f., it had to draw off a quantity of water from the storage in the forebay of the power house and canal. If the amount of the storage is taken into consideration, it will be found that the change of flow at various places along the canal up the canal from the power house travels

approximately at the rate determined by the Government engineers. Appellant's stress is laid upon the fact that it takes a much longer time to secure a uniform flowage throughout the entire canal of the full amount of water for which an opening is made at the power house. We must, however, take into consideration the source of supply of the water.

In Lake Erie, for example, at the mouth of the Niagara River, if there is an increment in the elevation it immediately moves down the Niagara River to the International Bridge and the flow is increased correspondingly directly to the elevation. In the case of appellant's canal, however, the effect of the opening (the lag, as it is called in this case) must travel back through the canal over thirty miles to Lake Michigan and then the water from Lake Michigan must travel down the canal again in order to secure a uniform flow of the increased amount. The Chicago River is filled with slips between its various docks. The storage in these slips must be drawn down in order to increase the slope from the river to Lake Michigan. In the meantime Lake Michigan itself may have fallen, and this would tend to retard the flow from Lake Michigan through the Chicago River and canal. In the Niagara River, on the other hand, there is but one factor involved—that is, the elevation of Lake Erie at Buffalo. The change in volume corresponds directly to that change in elevation.

(E) The effect of the appellant's diversion of water from Lake Michigan is a substantial interference with the navigable capacity of the Great Lakes

In addition to the finding of the Secretary of War in his decision of January 8, 1913, in which the Chief of Engineers concurred (Rec. Vol. VII, p. 10), there is considerable evidence of the important results of each variation of an inch in the lake levels. For example, in the report of the International Waterways Commission, dated January 8, 1910, it is stated:

The traffic which passed through the Detroit River, its busiest link, in 1907, amounted to 71,226,895 tons, valued at about \$700,000,000. About 70 per cent of this traffic is carried in large freight carriers which are loaded down to the greatest draft that can be carried into the harbors or through the channels between the lakes. With the depth now available they are usually loaded to a draft of about 19 feet, but careful watch is kept upon the stage of the waterways and advantage is taken of any temporary increase of stage to load the vessels deeper. The number of deep-draft vessels, as well as their size, and the share of lake traffic which they carry is increasing each year, while the lake traffic itself is increasing with great rapidity. Vessels which would carry an additional load of 85 tons for each inch of additional draft have recently been added to the fleet. Every inch added to the available depth of water would, therefore, be of material benefit to commerce. (Rec., Vol. VII, pp. 248-9.)

In the proceedings before the Secretary of War the representatives of the Canadian Government made clear the substantial nature of the effect produced by the diversion of this amount of water as follows:

That these seemingly small changes are important and divert traffic may be seen from the fact that in 1905, when the water in Lake Huron reached a minimum of 580.66 during the season of navigation and had a mean level for the year 580.95, there passed east through the American canals at the Soo 32,632,268 net tons and through the Canadian canal only 4,146,740 net tons. Practically all the large carriers with grain, iron ore, flour, and wheat passed through the United States canals.

In 1910 when the water in Lake Huron reached a minimum of 579.51 during the season of navigation and had a mean level of only 580.15 the Canadian canal with its three inches more water carried the bulk of the heavy freight east and passed nearly all the large carriers, the figures being Canadian canal, 31,531,036 tons, and United States canals, 15,602,673 tons.

That is to say, that, with plenty water (19.89 feet to 20.78 feet in the Poe lock), the Canadian lock passed only 11.3 per cent of the freight, but, with low water (18.08 to 18.73 feet in the same lock), the extra three inches in the Canadian lock increased these figures to 67 per cent. (Rec. Vol. VI, p. 3643.)

The importance of one inch of depth at the critical points of navigation is shown by the large amounts which have been expended by the Government in increasing those depths a few feet. In Vol. I of the report of the Chief of Engineers for 1893, p. 533, there is a résumé of the projects for improving the depths of the channels at the critical points prior to that time; and in the record in this case there appears (Vol. VI, p. 3624-3625) a summary showing that almost \$100,000,000 had been spent prior to June 30, 1911, in improving the harbors and channels of the Great Lakes.

The principal points at which each inch of lowering produces a substantial effect are given by Mr. Shenehon (Rec., Vol. I, p. 320) as follows:

The floor of the Poe lock is one of the critical points at the present time. The north end of Lake Michigan is an intricate place for navigation, with a good many shoals. And when a shoal is two inches nearer the surface by the lowering of the lake level, it becomes more of a menace. The vessels, in thick weather sometimes get astray, and loss of draught on a shoal may mean a very serious thing to a vessel. The Manitou Passage in Lake Michigan is a place of the same kind; Gray's reef passage, Sturgeon Bay canal, is a critical point, and the entrance to Green Bay is a place where a vessel is likely to get into trouble. The foot of Lake Huron approaching the St. Clair river is another place; also Lake St. Clair; the foot of the Detroit River and Bar Point, which is just beyond the Detroit

River, and the west end of Lake Erie; and more particularly that part of Lake Erie leading toward Toledo. The west end of Lake Erie is shallow. When the new lock is built at the Sault, giving greater drafts, the Poe lock will cease to be a critical point; and when the Livingston channel is built in the main Detroit River that will cease to be a critical point. But these others remain; these are fixed and that is what I mean by saying that the points that are critical at the present time, after improvements have been made permitting deeper navigation, those that are safely passed over now, two inches of lowering will reduce their efficiency. (Rec. Vol. I, p. 820-821.)

The appellant, however, asserts that this lowering is not to be regarded as a substantial one for the reasons: (1) That the lake levels vary from other causes more than from the effect of the proposed diversion; (2) because lake levels subsequent to the opening of the Drainage Canal were actually higher than they were prior to 1900; (3) because the United States itself has, by improvements in the Detroit and St. Clair Rivers, increased their discharging capacity, and therefore lowered the levels of Lakes Michigan and Huron by from 6 inches to 1 foot.

The first of these contentions is amply disposed of by the Secretary of War's decision and the report of the International Waterways Commission of January 4, 1907:

The oscillations will remain the same as before, but low water will fall lower and high

water will rise less high. The average draft of vessels must be diminished by the amount that the average level is lowered unless the depth be restored by remedial works. (Rec. Vol. IV, p. 2420).

See also the testimony of Major Keller (Rec. Vol. IV, p. 2608) and the statement of the representatives of the Canadian Government in the hearing before the Secretary of War (Rec. VI, p. 3640).

Appellant's second argument, that the lake levels were higher after the opening of the canal than they were before, is effectively answered by its own witness, Mr. Williams (Rec. Vol. II, p. 755):

Q. What inference, as an engineer, is it your intention that the court at the hearing of this case shall draw from your table number LXV so far as it throws light upon the question of fact which is involved in this case?

A. That the lakes are actually higher now than they were before the diversion. That is all.

Q. *In your opinion does it throw any light at all upon the question of fact as to the effect of diversion?*

A. *None whatever.*

As a matter of fact, however, appellant's statement is misleading. The lake levels, averaged over a period from 1861 to 1900, were higher *by six inches* than the average for the period from 1900 to 1910. (Rec. Vol. VII, p. 759.) Reference to the charts on the subject in appellant's narrative (opposite p. 220) will show a considerable lowering after 1910. Fur-

thermore, appellant was not withdrawing 10,000 c. s. f. during this period; the amount increased gradually from 4,314 c. s. f. in 1900 to 7,619 c. s. f. in 1913.

As to third of appellant's arguments, namely, that by the improvements in the Detroit and St. Clair Rivers their discharging capacity had been increased and therefore the level of Lakes Michigan and Huron had been lowered, the evidence of the appellee's engineers showed that the deposit of material in one part of the river had compensated for dredging in other parts. (Rec. Vol. V, p. 3005, 3334, 2844.)

This dredging, however, even if it had all the effect which is claimed for it by the appellant, was done by the United States in the improvement of navigation. It was part of a general project, and may have been deemed wise in the long run, even if there were some lowering of lake levels. Certainly, in the face of the express statements of the government engineers, it furnishes no argument that a lowering such as that which will be produced by the diversion of the water at Chicago is not to be looked upon as a substantial one.

An example of the inaccuracy with which counsel for appellant has prepared this portion of their case for presentation to this Court is found in such statements as the following (Appellant's Brief, p. 67):

The unimportance of a few inches is shown by the failure of the appellee to remove a platform over the floor of the Poe Lock,

which reduced the available depth of the Poe Lock approximately 0.33 of a foot, or about 4 inches. This condition existed from the time it was available for navigation in 1898 to 1913, when Mr. Ripley testified as to such condition. (Appellant's Narrative, p. 154.)

Both the above statement and the summary of Ripley's testimony in Appellant's Narrative seek to give the impression that Ripley was testifying from personal knowledge. As a matter of fact, Ripley was testifying from a *plan* of the lock.

Whatever the plan may have been, the platform was *not* built four inches or any other amount above the lock. This is clear from the testimony of appellee's witness De Young and the survey to which he testified. (Rec. Vol. VI, pp. 3977-78.) Curiously, not only is there no mention of De Young's name in Appellant's Narrative, index or otherwise, but his name is not even included in appellant's elaborate index of the record. (Vol. A.) There is no excuse for counsel's misstatement.

Another example is the following statement (appellant's Brief, pp. 67-68):

The reference plane for the navigation improvement project of 1903, of the critical points of navigation between Lake Superior and Erie ports provided for by Congress, was fixed by the Engineer Corps *six inches lower* because of the diversion of 10,000 second-feet at Chicago. (Appellant's Narrative, p. 155.) In other words, these critical points of naviga-

tion were dredged and deepened six inches lower than they would have been had the Chicago diversion not existed, and navigation was thus protected from the claimed effects of the Chicago diversion.

Reference to the record discloses that in the 1908 project the improvements were referenced to an assumed water surface of 4.0 lower in one case and 2.7 in the other. (Rec. Vol. III, p. 1298.)

V

The injury to navigation resulting from the lowering of the Lakes

We have already called attention to the findings of the Secretary of War on January 8, 1913, in this regard.

The lowest careful estimate of injury to American vessels alone is reported by the Chief of Engineers at \$1,000,000 per year. (Rec. Vol. VII p. 11.)

This finding of the Secretary of War is supported by the report of the International Waterways Commission of December 1, 1907 (Rec. Vol. IV, p. 2420-2421), and by the evidence of the witnesses for the United States in this case.

In fact, the extent of the injury to commerce which will be inflicted by this lowering of lake levels has never been seriously questioned. In the final report by the Board of Engineers on Waterways from Lockport, Illinois, to the mouth of the Illinois River, dated August 15, 1913, the members of that Board unite in the following statement:

The largest lake freighters recently built carry over 80 short tons of freight for each inch of loaded draft, and an uncompensated Chicago diversion of 10,000 second-feet would cause a loss to each vessel of at least 446 tons in carrying capacity for each down trip through the channels connecting with Lakes Michigan and Huron. This, based upon 25 trips per season, with vessels returning light, means a loss of at least 11,150 tons per year, and at a freight rate of 55 cents per ton represents a monetary loss of at least \$6,000 per large vessel per year. During the season of 1912 there passed through the locks at Sault Ste. Marie over 72,000,000 tons of freight, the greater part of which was carried in vessels of such size as to be affected by any loss of depth caused by a Chicago diversion. The tonnage of 1913 bids fair to exceed the tonnage of 1912. The lowest estimate of the loss to American vessels alone that has been brought to the attention of the Board is over \$1,000,000 per annum, and the loss will increase with the increase in the number and size of vessels. (Rec. Vol. IV, p. 2587.)

In this connection should also be considered the statement of the representatives of the Canadian Government in the hearing before the Secretary of War. (Rec. Vol. VI, pp. 3644-3645.) The figures presented by them show with respect to Canadian vessels—

a total loss per annum of \$281,628 to the lake freighters in freight charges alone

in addition to the loss resulting from the building of boats designed for certain depths in reliance upon a maintenance of those depths. They state further:

The damage accomplished by the lowering of the lakes and St. Lawrence levels can not be computed and shown simply by the loss of carrying capacity in tonnage for vessels. There is more to consider; the loss to the public at large in delaying cheaper rates; the loss to the country in rendering all harbour and channel improvements more costly and retarding their completion. (Rec. Vol. VI, pp. 3644-3645.)

The Shipping Federation of Canada, in its statement before the Secretary of War, reached substantially the same conclusions, finding a loss to Canadian vessels of \$273,093 in freight per season. It states also that at least one-half of the trans-Atlantic steamers, etc., would be affected in trading at Montreal, to the extent of ten inches in draught, as would also be affected the deep-draught colliers of the Dominion Coal Co., and, as a result, there would be an additional loss of \$322,675 per season. It calls attention to the

fact that a very large number of steamers at present using the St. Lawrence route have been especially designed and built for that trade, relying on the minimum depth of the present channel which is availed of by ship-owners to the last inch. (Rec. Vol. VI, pp. 3678.)

Analysis of evidence as to effect of lowering on navigation

(1) In speaking of the lowering of the surface levels of the Great Lakes and the connecting waterways, or loss of depth in these, it is understood that this lowering is referred to the surface levels which would exist in the absence of the diversion in the Chicago Drainage Canal which causes these lowerings. A lake, as Michigan, for instance, may be actually higher for a series of years following the opening of the Drainage Canal. The variation in the rainfall, the run-off, and the evaporation from these basins is such that the surface levels change from season to season and from year to year. We have periods of high water and periods of low water, and a period of ample supply with its tendency to higher levels may mask for a time the lowering effect caused by the diversion. See testimony of Wheeler (Rec. Vol. I, p. 91) and Shenehon (Rec. Vol. I, p. 286).

(2) Assuming for illustrative purposes a lowering of five inches for a diversion of 10,000 cubic second-feet in the Drainage Canal, the loss in load for draught of 19 feet 7 inches instead of 20 feet, of one of the big lake freighters is, for each inch, from 80 to 88 tons of 2,000 pounds, or 400 to 444 tons for 5 inches loss of draught. The loss in tonnage for losses in draught as computed by appellee's witness, Dr. Sadler (Vol. III, p. 1245), gives substantially the same result. See also the testimony on this question of Noble, Ernst, Townsend, Wheeler, Sabin, Livingstone, Kel-

ler, Shenehon, and Coulby. (Rec. Vol. I, pp. 15-16, 64, 77, 118, 180, 203, 246, 320, and 430.)

(3) For the large type of lake freighters whose loss of carrying capacity is 400 tons for a loss of 5 inches in draught, the annual loss depends on the number of loads carried during the season. Taking twenty round trips as a basis, and considering the upbound trips as light or partial loads, but the down bound trips as loaded to the limit of navigable depths, the loss of freight for the year for such a vessel is 8,000 tons. Some considerable range in the actual number of trips made appears from the testimony; see testimony of Livingstone, Coulby, Sabin, Wheeler and Adams. (Rec. Vol. I, pp. 203-205, 430-440, 443, 181, 118, and Vol. III, pp. 1372-3.) The testimony leads inevitably, we believe, to the conclusion that twenty round trips is a conservative number as a basis for computing the measure of damage to commerce. The inclusion of small craft in Professor Adams' figures accounts for his low estimate of the number of trips (11.6).

(4) The measure of annual damage based on an assumed loss of draught varied from the figures testified to by appellant's witness, Dr. Sadler (Appellant's Narrative, p. 159; Appellant's Brief, p. 68) to considerably higher figures established by the testimony of the appellee's witnesses, Wheeler, Livingstone and Coulby. (Rec. Vol. I, pp. 118, 207, 431.) Wheeler estimated the annual loss at \$227,230 for each inch of draught loss; Livingstone, \$500,000 and Coulby

(testifying merely to the loss of his fleet of 61 vessels), \$48,800.

While the maximum losses of carrying capacity are borne by the biggest vessels, mention at least should be made of the damage to a great fleet of smaller steamers and sailing vessels trading in the shallower ports.

(5) The above estimates of damage are based on the conditions for one of the years 1907, 1912 and 1918. In 1907, the commerce passing through the Soo Locks was 58,217,214 tons, and in 1918, it was 79,718,344 tons, an increase of 37 per cent in six years. In ten years, 1908 to 1918, the commerce increased from 34,674,437 to 79,718,344 tons, an increase of 117 per cent. In the 20-year period, 1898 to 1918, the commerce increased 688 per cent, so that the commerce of the latter year is more than seven-fold that of the former year. (Statistical report of commerce 1913, p. 11, Rec. Vol. VI, p. 3600.)

The record does not reveal the increase from 1913 to 1924.

(6) The abstraction of a great volume of water from the Great Lakes system by the diversion at Chicago entails great losses in the water power capacity of the Niagara and St. Lawrence rivers. At Niagara Falls alone, 10,000 cubic second feet is equivalent when developed with the highest efficiency to 280,000 horse power. (Rec. Vol. 1, p. 314.) On the St. Lawrence River, in the Long Sault Rapids alone the loss is 45,000 horse power. (Rec. Vol. I,

pp. 314-15-33.) The losses to the Canadians in the depletion of the volume of flow of the Cedar, Cascade, Split Rock, Coteau and Lachine Rapids has not been estimated, but is a very considerable figure. Assuming a gross annual rental of \$10 per horse power on the turbine shaft at Niagara Falls, the annual aggregate rental amounts to \$2,800,000, and half this amount capitalized at ten per cent, is \$14,000,000. The annual rental value of an electrical horse power at Niagara Falls is stated by appellee's witness F. G. Ray, at \$18 per year. (Rec. Vol. V, p. 2814, 2849-50.)

While it is recognized that the water diverted in the Chicago Drainage Canal will augment the water powers at Lockport, and on the Des Plaines and Illinois rivers, these powers are insignificant and petty in comparison with the great developments in the Niagara River.

(7) The lowering of the surface levels of the waters of the Great Lakes from the ship docks at Sault Ste. Marie to the Gulf of St. Lawrence does entail a loss of draught in that class of lake vessels carrying the greater percentage of freight. The draughts to which these vessels are loaded crowds the limit of draught in the navigable channels. In support of this statement we cite the testimony of appellee's witnesses, Noble, Ernst, Townsend, Sabin, Livingstone, Keller, and Ray, and appellant's witness, Ripley. (Rec. Vol. I, pp. 15, 26, 63, 76-77, 179, 180, 185, 201, 246-7, 248, 280; Vol. III, 1818, 1848-44.)

(8) While the damage to commerce due to lower surface levels caused by the diversion at Chicago is already great, this damage will be aggravated when the present through routes of vessel travel are developed for larger, deeper draught vessels; or the cost of this development will be greatly increased by the extra five or six inches of earth or rock excavation required to secure the same draught with lowered lake and river surface levels.

As illustrative of the measure of this increased cost, assume an artificial channel 300 feet wide at bottom and a mile in length. For six inches extra depth, the increase in excavation is 29,333 cubic yards. Estimating the cost of this excavation at \$2 per yard (Rec. Vol. III, p. 1319) the cost is \$58,666 per mile.

The cost of excavation for six inches required by lower surface levels for navigation on draughts of 25 feet or 30 feet because of the larger areas involved will be much in excess of the cost of excavation to make 20 and 21 foot navigation available, assuming the same lowered lake surface levels.

Deep draught navigation on the Great Lakes is not speculative, but certain. See testimony of appellee's witnesses, Ray and Noble (Rec. Vol. V, p. 2809; Vol. I, p. 3), and of appellant's witnesses, Cooley and Ripley (Rec. Vol. III, pp. 1706-7, 1818-19).

The first passage through the Soo locks of a vessel over 500 feet in length was in 1904. In

1913, 170 vessels ranging in length from 510 to 617 feet passed the Soo locks, and these vessels carried 52 per cent of the freight through these locks, or 41,400,000 tons. Statistical Report of Commerce, 1913. See also testimony of Dr. Sadler. (Vol. III, pp. 1253 et seq.) As an illustration of the growth and the present needs of draught for ocean traffic, the depth of the Panama Canal's depth recommended was 40-40½ feet. (Rec. Vol. III, p. 1317.) Appellant's witness, Sadler, assuming that business on the lakes should increase at the same rate during the next 24 years that it had during the preceding 24 years, estimated the damage done by the loss of three inches draught at \$30,000,000.

(9) Not only have the lengths of vessels increased, but the larger types have been built for, or are capable of loading to, draughts of from 21 to 25 feet. See testimony of appellee's witnesses, Wheeler, Sabin, Livingstone, and Coulby (Rec. Vol. I, pp. 118-119, 179, 207-208, 209, 431, 436) and appellant's witness Sadler (Rec. Vol. III, pp. 1251-52).

(10) The surfaces of the lakes are subject to certain fluctuations due to seasonal changes, and certain oscillation due to barometric inequalities and wind. Some testimony on the part of the appellant purported to show that a lowering of a few inches due to the lake diversion will, for this reason, be insignificant and cause no substantial injury to commerce. (Rec. Vol. III, p. 1776.) The fallacy of this suggestion, which appears obvious, was clearly estab-

lished by the testimony. We quote from the testimony of appellee's witness Shenehon:

Whatever the water level is, if it had been lowered, say two inches, by a diversion, you would still be short your two inches where you needed it, in the critical places. The natural fluctuations due to winds and to seasonal conditions are independent of the Drainage Canal, and the loss in draft is always measured by the amount of the lowering; you are always two inches closer to the bottom in such a case, whether the lake is raised or whether the lake is tilted up or not; you are always two inches closer to the bottom than you would be otherwise; and when you are running over critical areas two inches may count. Perhaps I should say: When you are attempting to run over critical areas. (Rec., Vol. I, p. 320.)

See also the testimony of appellee's witnesses Ernst, Wheeler, and Coulby. (Rec. Vol. I, pp. 64, 70, 71, 116, 180, 444-445.) See also the portions of the report of the International Waterways Commission, quoted by General Ernst:

The oscillations will remain the same as before, but low water will fall lower and high water will rise less high. The average draft of vessels must be diminished by the amount that the average level is lowered unless the depth be restored by remedial works.

A permanent average lowering of six inches in the lake's level therefore is not easily observable, and will probably not be noticed by navigators.

(11) It is good practice to improve channels and waterways so as to allow some clearance below the keel of the vessel. In rivers or protected channels where waves are not large in times of storm, this clearance is needed in order to allow for the squat or settling of a vessel when running at high speeds. If this clearance is not available, a loss of speed to the vessel is the result. In waterways exposed to wave action an additional clearance is needed to care for the surging of the vessel in a sea. Whatever clearance in these waterways is desirable, it is obvious that the lowering of the surface levels by the diversion at Chicago lessens the effective value of this clearance, and that channels and waterways of this character are damaged to this extent. Assuming a lowering of six inches due to the diversion at Chicago, it becomes apparent that where under the condition of no diversion a foot existed between the keels of vessels, but half a foot remains after the effects of the diversion have been accomplished. Considerable testimony along this line has been incorporated by the appellant, which purports to show that since this clearance is desirable, the effect of the lowering is of small moment. No controversy exists as to this clearance being good practice. It does not follow, however, that any large clearance of this kind is desirable or necessary on the floor of a ship lock such as that at Sault Ste. Marie, and the evidence is conclusive that no such clearance has existed in the critical improved channels in the lower Detroit River. The absence of

this clearance in the Detroit River has compelled vessels to run at slow speed.

(12) The lessened depth due to the lowering of the surface levels of the waters of the Great Lakes system by reason of the diversion at Chicago creates an obstruction to navigation wherever the mean depths are at present 20 feet or less, and having in mind future navigation, wherever the depths are 30 feet or less, and this obstruction exists in every bay, harbor, and inlet of these lakes including the terminal chambers at the entrance to ship locks. It creates an obstruction to navigation also in the St. Marys river from the ship locks, and including the ship locks; in the St. Clair, Detroit, Niagara, and St. Lawrence Rivers wherever the depths are within the limitation stated above. Places where the depths are close to the present limits of navigation, 19 to 20 feet, have been particularly spoken of in the testimony as critical areas. As the effect of this surface lowering is to limit the navigable areas of the Great Lakes and to change the sailing courses of the through freighters and make them longer, the lowering is an obstruction to navigation and a damage to the commerce of the Great Lakes. The limitation of the available sailing courses for the vessels of the Great Lakes caused by this lowering constitutes an obstruction to navigation. It is impracticable to limit the navigation of the Great Lakes only to avenues laid down as sailing courses.

In times of storm and fog many vessels diverge widely from the avenue traversed in times of clear air and fair weather. Any shoal or shallow area which has less depth by reason of the diversion at Chicago is an increased menace to vessels under these conditions, and is therefore an obstruction to navigation. While the limitations of loading will for a large percentage of the tonnage be fixed by the critical places in the main avenues of commerce, such as the Soo Locks, the Middle or West Neebish in the St. Marys River, Lake St. Clair, the lower Detroit River, the West end of Lake Erie, the approach to the particular harbor as Milwaukee, Chicago, Gary, Indiana Harbor, Toledo, Cleveland, Buffalo, or Toronto, the vast shallows and shoals of the Great Lakes are still more of a menace with lower levels than with such levels as would exist in the absence of the diversion at Chicago. The foregoing is, we believe, conclusively established by the evidence. See particularly the testimony of appellee's witness Ray (Rec. Vol. I, pp. 29, 273-278, 281-3), Shenehon (Rec. Vol. I, pp. 320-321), and Livingstone (Rec. Vol. I, p. 222) and for further evidence (Rec. Vol. I, pp. 105, 201, 246-248, 429). Ray cites many particular instances in which a difference in draught of two inches determines whether a boat will ground or clear (see Rec. Vol. I, pp. 246-248).

VI

Evidence as to methods of compensating for loss of lake level

To offset the damage to navigation caused by the lessened drafts resulting from the diversion at Chicago, three suggestions are offered by the appellant. First, build boats of such additional length that on the lessened draught they would carry the same amount of freight as the shorter boats on the impaired draught; second, excavate the various waterways and deepen the lock chambers to regain the lost draught; third, raise the surface levels of the various lakes and rivers by regulating or compensating works, so as to secure the original draughts.

Offsetting damage by lengthening vessels

The first suggestion of lengthening the vessels appears trivial. The appellant's witness Sadler estimated the cost of additional length to offset loss of draught inches as follows:

93 vessels 500 to 600 ft. in length.....	\$1, 404, 300
73 vessels 600 ft. class.....	\$1, 197, 200

This method of lessening the extent of the damage to commerce is, of course, a direct tax on the vessel interests, and a tax that goes on eternally, and is worthy of small consideration as a feasible solution.

Partially restoring depths by dredging, etc.

The second suggestion of restoring navigable depths by deepening the bottom in the various waterways, including the local chambers, had already received consideration by the International Waterways Com-

mission in its report on the Chicago Drainage Canal in 1907. The findings of this Commission are as follows:

28. The total cost of restoring the depth in the harbors of the Great Lakes and the channels between the lakes is therefore roughly \$10,000,000, and of restoring it in the Welland and St. Lawrence Canals is \$2,500,000 additional, or \$12,500,000 in all.

29. The shores of the Great Lakes are very far from being fully developed, and it is highly probable that many harbors not now in existence remain to be created, or if in existence remain to be improved. The lowering of the lakes' surface increase the difficulty and cost of such improvements. This consideration is of importance, although no money value can now be given it.

30. The expenditure of the sums mentioned above will restore the depths now existing, but it will not prevent very serious annoyance to the navigation interests during the execution of the work. The time required will be several years, and in the meantime the vast commerce of the Great Lakes will be hampered not only by deficient depth but also by the occupation of the channels, already crowded with commerce, by the excavating machines. (Rec. Vol. 4, p. 2422.)

The highly superficial character of the estimates made by the appellant's witness Ripley is revealed by his testimony. (Rec. Vol. III, pp. 1306-7, 1347-9, 1350-1, 1353.)

This testimony indicates very clearly that the method of excavation and deepening alone will not restore the navigable depths when the surface levels are lowered four inches or six inches, and that the cleaning-up processes will not restore the advantageous condition of the channel as it would exist in the absence of the lowering caused by the diversion at Chicago. The extra depths excavated by prior contracts are an asset to present navigation by allowing some partial clearance, at least, below the keels of vessels for more facile navigation; and in view of the greater navigable depths which the testimony in this case indicates are certain to prevail on the Great Lakes, the work of excavation already done is an asset towards the future deepening which the appellant in this case may not impair. In the end, Mr. Ripley's estimate is of so approximate a character and has omitted so many important channel ways, and has failed to take into account great lake areas where vessels may seek refuge in time of storm, that the cost indicated by Mr. Ripley, great as it is, is entirely inadequate to restore the navigable depths of the Great Lakes system and remove the obstructions to navigation created by the diversion at Chicago.

Regulating or Compensating Works

This method of restoration appears in some cases to represent sound engineering practice. The Board of Engineers on Deep Waterways in its report of June

30th, 1900, recommends regulating works to be placed at the head of the Niagara river. These works were to consist in part of submerged dams or weirs, and in part of movable gates operated from overhead platforms resting on masonry piers. The estimated cost at this time was \$796,923. The raising of the level of Lake Erie contemplated by these works was much in excess of the lowering caused by the diversion of 10,000 cubic second feet at Chicago, and was probably enough to more than compensate in Lake St. Clair and nearly compensate Lakes Michigan and Huron and the St. Marys river. Appellee's witness, Alfred Noble, was a member of this board. Mr. Noble testified (Rec. Vol. I, page 29) that since 1900 the cost of engineering works in general has increased. The presumption is that these regulating works would cost more at the present time than in 1900. The maintenance and operation of regulating works of this character should be taken into consideration in estimating the full outlay.

The International Waterways Commission in a report dated June 20, 1913, recommends compensating works to be built in the Niagara river just above Chippewa, within a few miles of the rapids above the cataract at Niagara Falls. These compensating works consist of a series of submerged concrete weirs stretching across the river. The estimated cost of these works is \$3,500,000. The cost of annual maintenance and operation is not stated. These compensating works are estimated to

raise the level of the Niagara river in the vicinity of the works about three feet, and to raise the mean level of Lake Erie $4\frac{1}{4}$ inches, the mean level of Lake St. Clair about $2\frac{3}{4}$ inches, and the mean level of Lakes Huron and Michigan about $1\frac{1}{8}$ inches. Notwithstanding the great expense of these works, it appears that for the mean lake level compensation is not such as to fully offset a lowering of $5\frac{1}{2}$ inches of Lake Erie caused by the diversion of 10,000 cubic second feet at Chicago. In times of low water, however, the estimated compensating effect is about $6\frac{1}{8}$ inches, which more than compensates the lowering by the diversion above mentioned. It is interesting to note in connection with the project of the International Waterways Commission the criticisms which this commission makes in its preliminary report upon the earlier project of June 30th, 1900, of the Board of Engineers on Deep Waterways. As indicative of the extreme differences of opinion as to the feasibility, expense, best method, and probable results of such regulating or compensating works as the appellant proposes, we need only refer to the testimony in which the subject is discussed. (Rec. Vol. IV, pp. 2616-2621, 2621-2627; Vol. V, p. 3348; Vol. IV, pp. 2614-2615, 2588-89; Vol. III, p. 1172, 1173-1175; Vol. II, pp. 742-3; Vol. III, pp. 1336-1339; Vol. I, p. 328.)

The International Waterways Commission regards the project of the Board of Engineers on Deep Waterways as impracticable. The Board of Engineers on Lakes to Gulf Waterway criticizes as unwise the

scheme of regulation proposed by Dean Shenehon. Appellant's witness Ripley appears to regard movable regulating works as desirable to maintain the full section of waterway in times of high water, which the scheme of the Lakes to Gulf Board violates in its method of submerged weirs. The project of submerged weirs of the above Board places the crest of these weirs 24 to 25 feet below the surface level of the St. Clair River, and the effect of these weirs is to increase the current wherever the weirs are located. In view of future navigable depths of 30 feet on the Great Lakes as indicated by the works of the Canadian government in the Welland Canal, these submerged weirs will become an obstruction to navigation. It is a question whether this system of submerged weirs on the St. Clair River would not augment the formation of ice blockades, and therefore tend to unduly raise the levels of Michigan-Huron and deplete during the winter season the elevations for Lakes Erie and Ontario, so that the Great Lakes system is thrown out of coordination.

We can not believe, however, that this Court will regard any of this evidence as material to the issues of this case.

To put into operation any scheme of compensation or regulation may require under the existing treaty with Great Britain the favorable action of the Joint High Commission.

Article IV of the treaty with Great Britain concerning the boundary waters between the United

States and Canada, proclaimed May 18, 1910, provides:

The high contracting parties agree that, except in cases provided for by special agreement between them, they will not permit the construction or maintenance on their respective sides of the boundary of any remedial or protective works or any dams or other obstructions in waters flowing from boundary waters or in waters at a lower level than the boundary in rivers flowing across the boundary, the effect of which is to raise the natural level of waters on the other side of the boundary, unless the construction or maintenance thereof is approved by the aforesaid International Joint Commission. (Rec. Vol. IV, p. 2564.)

The evidence submitted by the appellant as to the cost of deepening channels and the expense of constructing compensating works only emphasizes the fact that this diversion of water at Chicago is part of one problem affecting both this nation and Canada, the solution of which, so far as this nation is concerned, must be in the hands of the Federal Government. It is the contention of the appellee that this is precisely where it has been placed by Congress; and that the withdrawal of the water, as well as the deepening of channels and the building of compensating works, must be authorized by Congress and approved by the War Department.

VII

Injury to navigation due to current caused by excess flow through Chicago River

The current in the Chicago River in excess of the current authorized by the Secretary of War is extremely dangerous to navigation. This matter becomes particularly important in this case not only because it is a material interference with navigation but because it is in direct violation both of the Act of Congress of March 3, 1899, and the permits of the Secretary of War.

It appears in the record that the flow through the Chicago River varies throughout the day. It is increased in late afternoon and evening, which is the time when the greatest demand is being made upon the power house at Lockport.

It is true that the cross section of the Chicago River has been increased since 1901, and that a larger volume of flow can be accommodated without increasing the current. The testimony of the Chief Engineer of the appellant (Rec., Vol. III, p. 1598) on direct examination is as follows:

The river has been widened to a width of at least 200 feet and it has been deepened so that at the dock lines there is a depth of water of 16 feet, gradually deepening to a point 50 feet out from the docks where it is 26 feet deep for the middle 100 feet of the river.

This testimony is somewhat misleading. This does not apply to openings at bridges, and there are

many bridges in the Chicago river. Upon cross-examination of this witness (Rec. Vol. VI, pp. 3482-3488) it appeared that at the bridge openings the total width in some cases is as low as 140 feet, and at the St. Charles Air Line Bridge the width of the two draws are $55\frac{1}{2}$ and $59\frac{1}{2}$ feet. The width of the river is less than 175 feet at nearly every bridge between Halsted Street and the lake; at Van Buren Street the total width, including a by-pass, is 156 feet; at Taylor Street the width is 140 feet, with two by-passes of 137 square feet each.

Of course, the situation at the narrowest points is the one to be considered. These are the critical, the dangerous, points.

The testimony shows that the current in the Chicago river is greatly in excess of a mile and a quarter per hour and that it is detrimental and dangerous to navigation. The appellee called as witnesses a number of ship captains and navigators who have spent their lives in navigation and who have had experience in navigating ships on the Chicago river from two to thirty years.

The testimony of these men was that the current in the river is from two to ten miles per hour; that the safe draught was not over eighteen and a half feet; and that it was very dangerous to navigate the Chicago river because of the excessive current. (Rec. Vol. V, pp. 3020-3021, 3022-3023, 3023-3026, 3028, 3029, 3031-3033, 3033-3034, 3043, 3044, 3054.)

The largest boats do not navigate the Chicago river; they can not come in. A boat, however, of

50 feet beam loaded to 20 feet would occupy a cross section of approximately 900 square feet. Two such boats would occupy about one-half of the entire cross section of the river at many places, leaving that part of the river nearest the docks, the sides and bottom where there is normally a slow current for the passage of water. In this way the mean velocity is necessarily doubled and the maximum velocity would be correspondingly increased. While the testimony that there is a current of ten miles an hour may be somewhat exaggerated, yet from this evidence it is obvious that there must be a very great current and of course many times in excess of a mile and a quarter per hour rate.

Most of the witnesses were not cross-examined. What cross-examination there was by appellant was largely to show that the Chicago river is now deeper and wider than it was before the Sanitary District canal was opened, and that much of this work had been done by the Sanitary District. Of course, this is perfectly true, and as far as cross section is concerned, the navigability of the Chicago river is now greatly improved. On the other hand, during the last fifteen years, as is pointed out elsewhere in this brief, the size of boats has greatly increased and channels and harbors have had to be deepened and widened accordingly. Also, it should be kept in mind that the improvements in the Chicago river have been made with the consent of the Secretary of War and the Chief of Engineers.

The current and the navigability generally of the Chicago river was before Secretary of War Stimson upon the application of the Sanitary District of February 5, 1912. (Rec. Vol. VI, pp. 3616, 3618.)

As the condition exists to-day in the Chicago river there is a current far in excess of any current that has received any semblance of approbation by the Secretary of War, and a current which is detrimental and in fact dangerous to the navigation of the river. This is caused by the fact that the appellant is flowing through that river more water than is authorized by the Secretary of War. It amounts to a modification of the condition and capacity of the channel of a navigable water of the United States, and aside from all other elements of the case is sufficient to justify an injunction by this court in the case involving the diversion through the Chicago river.

VIII

There are no acts of Congress and no investigations or surveys of United States officers which amount even remotely to an invitation to build this canal, or to authority for its construction

Appellant's contention that authority for its unauthorized acts is to be found in the Act of Congress of 1827 relating to the Illinois and Michigan Canal, is discussed at length under our Point V, A (*infra*, p. 203).

Similar contentions with respect to the Niagara Falls Act of 1906 and the Canadian Boundary

Waters Treaty of 1910, are dealt with under subdivisions B and C of Point V (*infra*, pp. 219 and 226).

The attempt to work out some sort of estoppel from the reports of Government engineers with respect to the improvement of navigation between Lake Michigan and the Mississippi river, is discussed in our Point VIII (*infra*, p. 255).

IX

The evidence as to the cost of building sewers, purifying works, etc., in case the unauthorized diversion is enjoined

Appellant's brief (pp. 73-74) presents certain extraordinary conclusions as to the effect of forcing it and the City of Chicago to adopt methods such as are successfully being employed by practically all the large cities on the Great Lakes. In view of the appellee's motion to strike those portions of appellant's answer setting up such matters on the ground of their immateriality, no attempt was made by the appellee to rebut the testimony on which the conclusions are based. Reference to the record will disclose that the testimony is largely by interested witnesses and that it is not invulnerable. Inasmuch as the appellant predicates its contentions on the theory that such testimony is "undisputed evidence," it will not be inappropriate to direct the attention of this Court to certain significant facts.

The water supply and sewage disposal of a great city are usually parts of a problem which is handled by *one* municipality. In the case of Chicago we have

two municipal corporations dealing with this problem—the City of Chicago and the Sanitary District. The city has control of the water supply and the sewers. The Sanitary District undertakes to dispose of the sewage. The water supply is taken from Lake Michigan, and the expense to the city, therefore, for water supply is very much less than other cities are obliged to incur for that purpose.

Even if the City of Chicago were obliged to rebuild its system of sewers and to construct purifying works in order to take care of its sewage with the quantity of water now authorized by the Secretary of War, the expense to which it would be put on account of water supply and sewage disposal would not be greater, in proportion to its population, than that to which other cities have been put and which other cities must incur in the near future. Mr. Fuller, one of the witnesses for the appellant, stated (Rec. Vol. III, p. 1468) that the cost to the City of Washington for water supply and sewage disposal works was \$104 per capita, and presented figures showing that for a part of its water supply works the City of New York has already expended more than \$200,000,000. In the light of these figures it can not be said that appellant's highest estimate of expense is more than some other cities are paying for a pure water supply.

It will not do to say that there is no other way of disposing of the sewage of Chicago, because many other cities are obliged to dispose of their sewage, and are disposing of it, in other ways.

It should be remembered that except for a brief hearing in April, 1923, the bulk of the testimony on this question was heard prior to December, 1914. At that time there is a statement in the record of the hearing before the Secretary of War as to other successful methods of sewage disposition in London, Manchester, and Birmingham, England; Emscher District, Germany; Columbus, Ohio; Baltimore, Md.; and Toronto, Canada. In all these cases, according to the statement—

the quantity of water for diluting the final effluents is quite insignificant.

The statement says further that—

the subject of purification of sewage is far beyond the experimental state. * * *

It is to be noted also that the experience of other cities, notably the experience of Manchester with the Manchester Ship Canal, shows conclusively that the natural discharge of the Chicago river plus, say, 1,000 second-foot drawn from Lake Michigan for navigation purposes, would be amply sufficient to carry away through the drainage canal the purified effluents of Chicago and the whole Sanitary District. (Rec. Vol. VI, pp. 3648-3649-3650-3651-3652.)

The appellant itself has recognized that it is only a matter of time when it must adopt another method of sewage disposal. (See statement of appellant; Chief Engineer at the hearing before the Secretary of War, Rec. Vol. VI, pp. 3691-3692.)

The reports of Engineers Hering and Fuller (Rec. Vol. I, pp. 496-548), and of Mr. Wisner, Chief Engineer of the appellant, show clearly that there are other feasible methods of sewage disposal which may be used by Chicago, and that, really, the only question involved is one of expense. The Secretary of War dealt with this contention of the appellant as follows:

I have carefully examined, however, the evidence which both sides have introduced bearing upon the sanitary needs of the City of Chicago, and my conclusion is in no way shaken. I am not persuaded that the amount of water applied for is necessary to a proper sanitation of the City of Chicago. The evidence indicates that at bottom the issue comes down to the question of cost. Other adequate systems of sewage disposal are possible and are in use throughout the world. The problem that confronts Chicago is not different in kind but simply larger and more pressing than that which confronts all of the other cities on the Great Lakes, in which nearly 3,000,000 people of this country are living. The urban population of those cities, like that of Chicago, is rapidly increasing, and a method of disposition of their sewage, which will not injure the potable character of the water of the lakes, must sooner or later be found for them all. The evidence before me satisfies me that it would be possible in one of several ways to at least so purify the sewage of Chicago as to require very much less water for its dilution than is now required by it in its unpurified condition. A recent report of the

engineer of the sanitary commission (Oct. 12, 1911) proposes eventually to use some such method, but proposes to postpone its installation for a number of years to come, relying upon the present more wasteful method in the meanwhile. It is manifest that so long as the city is permitted to increase the amount of water which it may take from the lakes there will be a very strong temptation placed upon it to postpone a more scientific and possibly more expensive method of disposing of its sewage. (Rec. Vol. VII, pp. 14-15.)

This feature of the case need not, we believe, be further discussed for, after all, under the theory of appellee, these considerations urged by the appellant can not be given effect over the paramount rights of Federal control of Navigation.

ARGUMENT ON THE LAW

(Pages 123-326)

I

All the waters here involved are "navigable waters of the United States" as that term is used in the various acts of Congress

As is already apparent from our Statement of the Case, the waters involved in this litigation are the following:

1. The Great Lakes except Lake Superior, the various connecting waters between the Great Lakes and the St. Lawrence River.

2. The Chicago River, including its branches, and the Calumet River, including its branches.

3. The Desplaines, Illinois, and Mississippi Rivers.

There is substantially no dispute as to the navigable character of these waters (except possibly as to the upper portion of the Little Calumet River), nor is it disputed that these waters are embraced within the term "navigable waters of the United States" both as employed in the Acts of Congress and as defined by this Court in discussing the scope of the power of Congress with reference to interstate commerce. We shall, however, take this occasion to refer to decisions of this Court which determine the matter conclusively.

The definition of "navigable waters of the United States" is originally to be found in the case *The Daniel Ball v. United States*, 1871, 10 Wall. 557,

although it was necessarily involved in the prior decision of this Court in the case of *The Propeller Genesee Chief et al. v. Fitzhugh et al.*, 1851, 12 How. 443, and was recognized by the Congress of the Confederation over sixty years prior thereto in the Ordinance of 1787 (see *Economy Light & Power Co. v. United States*, 256 U. S. 113). The definition as stated in the case of *The Daniel Ball* is as follows:

Those rivers must be regarded as public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition, as highways for commerce, over which trade and travel are or may be conducted in the customary modes of trade and travel on water. And they constitute navigable waters of the United States within the meaning of the Acts of Congress, in contradistinction from the navigable waters of the States, when they form in their ordinary condition by themselves, or by uniting with other waters, a continued highway over which commerce is or may be carried on with other States or foreign countries in the customary modes in which such commerce is conducted by water. (10 Wall. 563.)

The principles thus stated have been recognized and applied by this Court in a great many cases among which we mention *United States v. The Steamer Montello*, 1870, 11 Wall. 411; same case, 1874, 20 Wall. 480; *Oklahoma v. Texas*, 1921, 258 U. S. 574; *Brewer-Elliott Oil & Gas Co. v. United States*, 1922, 260 U. S. 77.

The character of the Chicago River, its branches and forks as navigable waters of the United States is specifically recognized in *Escanaba and Lake Michigan Transportation Co. v. City of Chicago*, 1883, 107 U. S. 683. The same is true of the Calumet River in *Cummings v. Chicago*, 1902, 188 U. S. 410, and of the Desplaines and Illinois Rivers in *Economy Light & Power Co. v. United States*, 256 U. S. 113.

The Great Lakes, their connecting waters, and the St. Lawrence River, in addition to being navigable waters of the United States (*The Propeller Genesee Chief*, 12 How. 443; *United States v. Rodgers*, 150 U. S. 249; *Illinois Central R. R. Co. v. Illinois*, 146 U. S. 387) are "international waters, being dedicated in perpetuity to the common navigation of all the inhabitants" of the countries on both sides of the boundary (Moore, *International Law Digest*, Vol. 1, p. 675; Hyde, *International Law*, 1922, Vol. 1, pp. 320-321).

The international character of these waters has been recognized by this court in *The Propeller Genesee Chief*, *supra* (pp. 453-454):

These lakes are in truth inland seas. Different states border on them on one side, and a foreign nation on the other. A great and growing commerce is carried on upon them between different states and a foreign nation, which is subject to all the incidents and hazards that attend commerce on the ocean. Hostile fleets have encountered on them, and prizes been made; and every reason which existed for the grant of admiralty jurisdiction

to the general government on the Atlantic seas, applies with equal force to the lakes. There is an equal necessity for the instance and for the prize power of the Admiralty Court to administer international law, and if the one cannot be established, neither can the other.

Again. The Union is formed upon the basis of equal rights among all the States.

* * * * *

That equality does not exist, if the commerce on the lakes and on the navigable waters of the West are denied the benefits of the same courts and the same jurisdiction for its protection which the Constitution secures to the States bordering on the Atlantic.

In *Moore v. American Transportation Co.*, 24 How. 1, 37-38, this Court, in holding that navigation of the Great Lakes did not fall within the statutory phrase "inland navigation," said:

But the business upon the great lakes lying upon our northern frontiers, carried on between the states, and with the foreign nation with which they are connected (and this is the only business which Congress can regulate, or with which we are dealing), is of a very different character. They form a boundary between this foreign country and the United States for a distance of some twelve hundred miles, and are of an average width of at least one hundred miles; and this, without including Lake Michigan, of itself three hundred and fifty miles in length and ninety in breadth, which lies wholly within the United States.

The aggregate length of these lakes is over fifteen hundred miles, and the area covered by their waters is said to be some ninety thousand square miles. The commerce upon them corresponds with their magnitude. * * *

This commerce, from its magnitude, and the well known perils incident to the lake navigation, deserves to be placed on the footing of commerce on the ocean; and we think, in view of it, Congress could not have classed it with the business upon rivers, or inland navigation, in the sense in which we understand these terms.

These lakes are usually designated by public men and jurists, when speaking of them, as great inland waters, inland seas, or great lakes.

In *United States v. Rodgers*, 150 U. S. 249, 258, the Great Lakes were held to be "high seas" within the meaning of an Act of Congress. See also *United States v. Chandler-Dunbar Water Power Co.*, 229 U. S. 53, in which this Court said that the matter of the levels of the Great Lakes (p. 67)—

was a matter of international consideration, for Canada, as well as the United States, was interested in the control and regulation of the lake water levels.

The international character of the Great Lakes and their connecting waters is confirmed by the Boundary Waters Treaty of January 11, 1909. Inasmuch as this treaty is discussed more at length elsewhere we shall pause here only to note that to a limited extent Lake Michigan is likewise given an international

character by the covenant in Article I that the free and open navigation provided for with respect to the boundary waters "shall extend to the waters of Lake Michigan."

II

The level of the Great Lakes and the diversion of water from the St. Lawrence River basin to the Mississippi River basin are both subjects of interstate commerce national (and also international) in character and are of such a nature as to require exclusive control by Congress. Independently, therefore, of any assertion of control by Congress, the Illinois Enabling Act of 1889, in so far as it authorized and directed the appellant to do the acts here complained of without authorization of Congress, was void.

We propose under this heading to demonstrate that independently of the Acts of Congress of September 19, 1890, and March 3, 1899, the State of Illinois (acting through its creation, the Sanitary District of Chicago) had no right or power to do the acts here complained of. Particularly it had no right to do any act, whether within or without its territorial limits, that would lower the level of the Great Lakes, their connecting waters, and the St. Lawrence river, or to create a large navigable river debouching into another river basin, without the authority of Congress. The subject of the level of these waters is, we believe, national (and, indeed, international) in character; it is, therefore, of a sort as to which the non-action of Congress is to be taken as a declaration that it shall be free from interference by the several States. The conclusion to which we are led is that Sections 20

and 23 of the Enabling Act of the Illinois legislature of 1889, in so far as they purported to require the appellant to withdraw certain amounts of water from Lake Michigan (20,000 cubic feet for each 10,000 inhabitants of the district) irrespective of the authorization of Congress, were unconstitutional and void because of their inevitable conflict with the exclusive power of Congress over such subjects of interstate commerce.

In view of the fact that Congress has beyond question asserted its paramount control over these subjects by the Act of March 3, 1899 (Section 10 of which specifically prohibits these acts of the appellant), our contentions under the present heading may be thought unnecessary. We are led to include them in this brief by the misleading assertions by appellant as to the state of the law prior to March 3, 1899, from which appellant attempts to work out some sort of authority or justification for its defiance of the law after that date.

In the first place, appellant's brief reiterates frequently that an apparently unlimited diversion of water by it was lawful under the law as it existed prior to the assertion of Federal control by Congress in the Act of September 19, 1890. We do not understand the significance of this assertion, for admittedly the Act of Congress of September 19, 1890, was passed two years before any contracts had been let or work begun on the excavation of the channel for the canal. The basis for this contention, whatever may be its

significance, is apparently in the line of decisions beginning with *Willson v. Black Bird Creek Marsh Co.*, 2 Pet. 245, which hold that, in the absence of legislation by Congress, a state may lawfully authorize an obstruction of navigable waters *entirely within its boundaries*. As is manifest from our analysis of these cases (*infra*, p. 136) this doctrine was never extended to navigable waters which, like the Ohio River or the Great Lakes, are not wholly within the boundaries of a single state; in fact, its application to these waters was negatived in such cases as the *Wheeling, Bridge Case*, 13 How. 558. The extent of lawful state action in such waters was restricted to matters purely local in character, such as the regulation of pilotage (*Cooley v. Port Wardens*, 12 How. 299) or the improvement of harbors (*Mobile County v. Kimball*, 102 U. S. 691). The authorization of Congress was and always has been a necessary prerequisite to the creation of obstructions or modifications of the navigable capacity of such waters.

In the second place, appellant's brief reiterates no less frequently that its acts were "affirmatively authorized by law" within the meaning of that phrase as it appears in Section 10 of the Act of Congress of September 19, 1890. We cannot conceive what bearing this contention has on any questions involved in this case for the Act of Congress of March 3, 1899, was enacted into law nearly a year before the appellant (under the permit of May 8, 1899) accomplished a connection between its channel and the Chicago

River and thereby diverted water from Lake Michigan. The basis for this contention, however, is a misapplication of the decision of this Court in *United States v. Bellingham Bay Boom Co.*, 176 U. S. 211, which held that in the case of an obstruction of a navigable stream confined *wholly within the boundaries of a State*, the words "affirmatively authorized by law" in the Act of 1890 included lawful authorization by an act of the state legislature (see *infra*, p. 201). Manifestly, an obstruction of a navigable water like Lake Michigan or the Ohio and Mississippi Rivers could not *lawfully* be authorized by legislation of a single state *either* before or after the enactment of the Act of 1890.

The international character of the subject of the levels of the Great Lakes was noted by this Court in *United States v. Chandler Dunbar Water Power Co.*, 229 U. S. 53, at pp. 66-67:

That outflow [i. e., from Lake Superior] has great influence both upon the water level of Lake Superior and also upon the level of the great system of lakes below which receive that outflow. A difference of a foot in the level of Lake Superior may influence adversely access to the harbors on that lake. The same fall in the water level of the lower lakes will perceptibly affect access to their ports. This was a matter of international consideration, for Canada, as well as the United States, was interested in the control and regulation of the lake water levels.

If we are correct in our contention that this subject of lake levels is *national* in character and is therefore exclusively under the control of Congress, then it makes no difference whether interference with that control proceeds from a state statute or from the acts of individuals. As was said in *Kansas City Street R. Co. v. Kaw Valley Drainage Dist.*, 233 U. S. 75, at p. 78:

The freedom from interference on the part of the states is not confined to a simple prohibition of laws impairing it, but extends to interference by any ultimate organ.

We shall now proceed to a brief citation of cases involving the distinction between subjects *local* and subjects *national* in character with respect to interstate commerce, and particularly with respect to obstructions and modifications of the navigable capacity and condition of navigable waters of the United States.

A

Those subjects of interstate commerce which require a general system or uniformity of regulation are national in character, and as to such subjects the power of Congress is exclusive; those subjects of interstate commerce admitting of diversity of treatment according to the special requirements of local condition are local in character, and as to such subjects the States may act within their respective jurisdictions until Congress sees fit to act.

Cases involving the principle set forth in the foregoing subheading have been reviewed so recently and so thoroughly in the *Minnesota Rate Cases*, 230 U. S. 352, that we shall not attempt to do more than observe more particularly the application of

the principle to obstructions of navigation and of the navigable capacity of navigable waters of the United States. We quote, however, the following pertinent portions of the opinion in that case (pp. 399-400):

There is no room in our scheme of government for the assertion of state power in hostility to the authorized exercise of Federal power. The authority of Congress extends to every part of interstate commerce and to every instrumentality or agency by which it is carried on, and the full control by Congress of the subjects committed to its regulation is not to be denied or thwarted by the commingling of interstate and intrastate operations. This is not to say that the nation may deal with the internal concerns of the state, as such, but that the execution by Congress of its constitutional power to regulate interstate commerce is not limited by the fact that intrastate transactions may have become so interwoven therewith that the effective government of the former incidentally controls the latter. This conclusion necessarily results from the supremacy of the national power within its appointed sphere.

* * * * *

The grant in the Constitution of its own force, that is, without action by Congress, established the essential immunity of interstate commercial intercourse from the direct control of the states with respect to those subjects embraced within the grant which are of

such a nature as to demand that, if regulated at all, their regulation should be prescribed by a single authority. It has repeatedly been declared by this court that as to those subjects which require a general system or uniformity of regulation, the power of Congress is exclusive. In other matters, admitting of diversity of treatment according to the special requirements of local conditions, the states may act within their respective jurisdictions until Congress sees fit to act; and, when Congress does act, the exercise of its authority overrides all conflicting state legislation.

* * * * *

The principle which determines this classification underlies the doctrine that the states can not, under any guise, impose direct burdens upon interstate commerce. For this is but to hold that the states are not permitted directly to regulate or restrain that which, from its nature, should be under the control of the one authority, and be free from restriction, save as it is governed in the manner that the national legislature constitutionally ordains.

In *Covington & Cincinnati Bridge Co. v. Kentucky*, 154 U. S. 204, will be found a summary of cases applying the principle to questions of navigation, and a later summary is contained in the briefs of counsel in *Wilmington Transportation Co. v. R. R. Commission of California*, 236 U. S. 151.

The cases are not hard to classify for they fall naturally into two groups: (1) Those involving waters, the navigable portions of which, like the

Chicago and Calumet Rivers, are wholly within the bounds of a single state, and which for convenience will be referred to as *State* navigable waters, and (2) those involving waters the navigable portions of which, like Ohio River and Lake Michigan, are in two or more states, or like the other Great Lakes form boundaries between this and other countries, and which for convenience will be referred to as *inter-state* navigable waters.

B

Until Congress asserted its paramount control the subject of obstructions to the navigable capacity of State navigable waters, not affecting navigable waters without the State, was deemed to be local in character and was held to be subject to the authority of the State

We have no doubt whatever but that prior to the assertion of Federal control over the matter the State of Illinois might lawfully have authorized the construction of bridges in the Chicago and Calumet Rivers. Bridges, prohibitive as they might be of navigation in those rivers, could have no effect on navigation elsewhere. So, too, the State might have authorized dams in those rivers so long as the water was ultimately permitted to flow into Lake Michigan and the dam was for some legitimate purpose within the power of the State. Such obstructions, however, differ greatly from an obstruction of an interstate water, whether by a bridge whose span is too low or by decreased water levels which limit the draught of boats. Such cases will be discussed under our next subheading.

(1) *Cases involving dams across state navigable waters* are *Willson v. Black Bird Creek Marsh Co.*, 2 Pet. 245;

Pound v. Turck, 95 U. S. 459; *Huse v. Glover*, 119 U. S. 548; and *Monongahela Navigation Co. v. United States*, 148 U. S. 312.

(2) Cases involving bridges across state navigable waters are *Gilman v. Philadelphia*, 3 Wall. 718; *Escanaba and Lake Michigan Transportation Co. v. Chicago*, 107 U. S. 683; *Cardwell v. American Bridge Co.*, 113 U. S. 205; *Hamilton v. Vicksburg, Shreveport and Pacific R. R. Co.*, 119 U. S. 280; *Willamette Iron Bridge Co. v. Hatch*, 125 U. S. 1, and *Lake Shore & Michigan Southern R. Co. v. Ohio*, 165 U. S. 365.

(3) Cases involving improvement of state navigable waters are *Withers v. Buckley*, 61 U. S. 84, *Sands v. Manistee River Improvement Co.*, 123 U. S. 288. In this connection may also be considered cases like *Huse v. Glover*, 119 U. S. 459, where by means of locks and dams the navigation of a state navigable water has been facilitated.

In every one of these cases the navigable water was, like the Black Bird Creek, the Chippewa River, and the Schuylkill River, wholly within the State which authorized the obstruction. In none of them did the obstruction affect or injure the navigable capacity of an interstate navigable water.

C.

With respect to interstate navigable waters, the subject of obstructions to their navigable capacity has always been deemed national in character, and subject to the exclusive control of Congress.

The obstruction resulting from a bridge the span of which is too low, and the obstruction resulting

from a lowering of water level, are manifestly of the same character. In the one case a boat can not clear because its mast or chimney will strike the bridge; in the other case, a boat can not clear because its keel will strike the river or lake bed. There is no distinction in principle, therefore, between the two types of obstruction, and the action of appellant in the present case is exactly the same in nature and effect as if it had thrown a bridge across Lake Michigan, or any of the Great Lakes or their connecting waters, the span of which was six inches too low for the passage of the larger vessels. That a State may not lawfully create such an obstruction, even in the absence of any affirmative assertion of control by Congress, is, we believe, conclusively established by such cases as the *Wheeling bridge case*, 13 How. 553, and *Covington & Cincinnati Bridge Co. v. Kentucky*, 154 U. S. 204. It was impliedly held in all the cases discussed in our preceding subheading, having to do with obstructions of *state* navigable waters.

We shall first, however, by a brief review of the cases, point out the limits to which this Court has heretofore gone in upholding state action with reference to *interstate* navigable waters.

1. *The power of the States with respect to interstate navigable waters has at all times been limited to matters purely local in character, incidental to and aiding commerce, and not affecting navigation elsewhere*

It would serve no useful purpose to undertake an analysis of all the cases which might properly be

grouped under this subheading. They are important only in so far as they illustrate the application to state restrictions on navigation of interstate waters, of the distinction between subjects of interstate commerce local and national in character. In the cases which have already been referred to (*supra*, p. 134) are cited what we believe to be representative cases on this question, and we need not repeat the citations or review the facts of each case. It will be noticed, however, that the cases fall into four fairly well-defined classes. Other, and perhaps better, classifications might possibly suggest themselves, but would not, we believe, add anything to the solution of our present query.

(a) *The regulation of pilotage.*—The case which originally dealt with this subject, and which may be regarded as the leading case is *Cooley v. Port Wardens*, 12 How. 299.

(b) *Protection of coasts and improvement of harbors, bays, and streams.*—The leading case dealing with this subject is *Mobile County v. Kimball*, 102 U. S. 691.

(c) *Quarantine and inspection laws and the policing of harbors.*—A typical case dealing with this subject is *Morgan's, etc., Co. v. Louisiana Board of Health*, 118 U. S. 455. This and similar cases are important in our consideration of appellant's claim of justification under the state's police power.

(d) *Regulation of wharfs, piers, and docks.*—A typical case dealing with this subject is *Parkersburg, etc., Trans. Co. v. Parkersburg*, 107 U. S. 691.

It will be noticed that there are seemingly no cases involving the right of the state, in the absence of legislation by Congress, to divert water from an interstate navigable water for purposes of sewage disposition or drinking water. The principles applied in the foregoing cases suggest, however, the correct application of the principle distinguishing between subjects of interstate commerce local and national in character. The ordinary diversion, which might properly be regarded as local in character, is that which returns the water thus used to the same navigable body of water. Such a use has no effect on the level or the navigability of that water, and is the method employed by nearly every city, so far as we know, except Chicago.

It will further be noticed that in all the foregoing cases, even those involving public health, such as quarantine and inspection laws, the paramount control of Congress over the various subjects is explicitly recognized, to be asserted when and where it sees fit.

2. Obstructions to the navigable capacity of interstate waters without authority from Congress have always been held unlawful, being national in character and subject to the exclusive control of Congress

We submit that the case of *Pennsylvania v. Wheeling and Belmont Bridge Co.* (usually referred to as the *Wheeling Bridge Case*), 13 How. 518, conclusively establishes that, even in the absence of any assertion of its paramount control by Congress, obstructions to the navigable capacity of interstate

waters are unlawful. In that case the state of Pennsylvania, by original bill filed in this court, sought to restrain the Bridge Company from proceeding with the construction of a bridge across the Ohio River at Wheeling. The facts of the case resemble the instant case to a striking extent.

At the point when the bridge was being constructed the Ohio River was wholly within the boundaries of Virginia, but was, of course, an interstate navigable water because of its serving as a highway of commerce for the states both above and below Wheeling. In this respect, therefore, it more than covers the instant case where we are dealing with a situation exactly as if a bridge were thrown across any of the Great Lakes or their connecting waters. The Bridge Company justified its act by authority conferred upon it by an act of the Virginia Legislature, just as appellant does under the Illinois Enabling Act of 1889. During the pendency of the suit the Bridge Company proceeded with the construction of the bridge so that it was completed at the time the decision of this Court was rendered, holding it an unlawful obstruction; just as in the instant case appellant has proceeded with its program of construction of canals, diverting water through the Calumet River, and taking an unauthorized amount of water from Lake Michigan in the face of the institution of the Calumet River Suit in 1908 and the Main Channel Suit in 1913, and the limitations contained in the prior permits.

The contentions of the Bridge Company in regard to the *extent* of the obstruction were substantially the same as appellant's, as is shown by the following:

But it is said, the bridge constitutes no serious obstruction to the navigation of the Ohio; that only seven steamboats of two hundred and thirty which ply upon the river as high as Pittsburgh are obstructed, and that arises from the height of their chimneys, which might be lowered at a small expense in passing under the bridge; that by the introduction of blowers the chimneys might be shortened without lessening the speed of the boats; that the goods and passengers which are conveyed on the public lines of communication, between Pittsburgh and Philadelphia, could be as well conveyed on boats of lower chimneys, and consequently the State, as proprietor of those lines, if at all injured, is injured so inconsiderably as not to lay the foundation of this procedure; that none of the packets or the other boats on the river are owned by the State of Pennsylvania (p. 568).

The same argument was made, too, that the theory of such cases as *Willson v. Black Bird Creek Marsh Company*, 2 Pet. 245, having to do with obstructions of *state* navigable waters should be applied, and that there was "no act of Congress prohibiting obstructions on the Ohio River." As a matter of fact the only Act of Congress was the sanctioning of a compact made by Virginia and Kentucky, at the time of the latter's admission into the Union, which compact was the same as that contained in Article IV of the Ordinance of 1787, the provisions of which were accepted and agreed to by the State of Illinois.

Other contentions of the appellant in the *Wheeling Bridge case*, which are echoed by appellant in this case, are summarized in the opinion as follows:

That the bridge is a connecting link of a great public highway, as important as the navigation of the Ohio River; that Pennsylvania had set the example of authorizing bridges across the Ohio; that certain engineers of the United States had recommended a wire suspension bridge at Wheeling, and gave as their opinion that "by an elevation of ninety feet, every imaginable danger of obstructing the navigation would be avoided;" that certain reports of committees in Congress recognized the necessity of a bridge at Wheeling, and recommended an appropriation for that purpose; that the headway for steamers left by the bridge is amply sufficient, forty-seven feet above the water, for all useful purposes; and if sufficient draught can not be had at that height, blowers might be added; that chimneys might have hinges on them; so as to be lowered without much inconvenience; that the bridge will not be an appreciable inconvenience to the average class of boats; that the bridge will not diminish or destroy trade between Pittsburgh and other ports, or do irreparable injury to the citizens of Pennsylvania (p. 558).

This Court, in holding the *Wheeling Bridge* to be an unlawful obstruction, and in granting the injunctive relief prayed by the State of Pennsylvania, ruled against substantially every contention made by

the appellant in the present case. We quote portions of the opinion as follows:

And this injury is of a character for which an action at law could afford no adequate redress. It is of daily occurrence, and would require numerous, if not daily prosecutions, for the wrong done; and from the nature of that wrong, the compensation could not be measured or ascertained with any degree of precision. The effect would be, if not to reduce the tolls on these lines of transportation, to prevent their increase with the increasing business of the country.

If the obstruction complained of be an injury, it would be difficult to state a stronger case for the extraordinary interposition of a court of chancery. In no case could a remedy be more hopeless by an action at common law. The structure complained of is permanent, and so are the public works sought to be protected. The injury, if there be one, is as permanent as the work from which it proceeds and as are the works affected by it. And whatever injury there may now be, will become greater in proportion to the increase of population and the commercial developments of the country. And in a country like this, where there would seem to be no limit to its progress, the injury complained of would be far greater in its effects than under less prosperous circumstances (p. 562).

* * * * *

It is objected that there is no act of Congress prohibiting obstructions on the Ohio River, and

that until there shall be such a regulation, a state, in the construction of bridges, has a right to exercise its own discretion on the subject.

* * * * *

The case of *Wilson v. The Black Bird Creek Marsh Company*, 2 Pet. 250, is different in principle from the case before us. A dam was built over a creek to drain a marsh, required by the unhealthiness it produced. It was a small creek, made navigable by the flowing of the tide. The Chief Justice said it was a matter of doubt, whether the small creeks, which the tide makes navigable a short distance, are within the general commercial regulation; and that in such cases of doubt, it would be better for the court to follow the lead of Congress. Congress have led in regulating commerce on the Ohio, which brings the case within the rule above laid down. The facts of the two cases, therefore, instead of being alike, are altogether different.

No state law can hinder or obstruct the free use of a license granted under an Act of Congress. Nor can any state violate the compact, sanctioned as it has been by obstructing the navigation of the river. More than this is not necessary to give a civil remedy for an injury done by an obstruction (p. 566).

* * * * *

The fact that the bridge constitutes a nuisance is ascertained by measurement. The height of the bridge, of the water, and of the chimneys of steamboats, are the principal facts to be ascertained. If the obstruction

exists, it is a nuisance. To ascertain this a jury is not necessary. It is shown in the report, by a mathematical demonstration. And the other matters, connected with the case, as to the benefit of high chimneys, lowering of them in passing under the bridge, and shortening chimneys, are matters of science and experience, better ascertained by a report than by a verdict. And the same may be said of the statistics which are in the case (p. 568).

* * * * *

The Bridge Company had legal notice of the institution of the suit, and of the application for an injunction to stay their proceedings, before their cables were thrown across the river. This should have induced them to suspend, for a time, their great work, alike creditable to the enterprise of their citizens, and the genius and science of the engineer who planned the bridge and superintended its construction. It is a matter of regret that, by the prosecution and completion of the bridge, they have incurred a high responsibility.

For the reasons and facts stated, we think that the bridge obstructs the navigation of the Ohio, and that the State of Pennsylvania has been, and will be, injured in her public works in such manner as not only to authorize the bringing of this suit but to entitle her to the relief prayed (p. 578).

In view of the relief granted to the State of Pennsylvania in the *Wheeling Bridge case*, where the liti-

gants were in the situation of private individuals before this court, how much stronger is the right of the United States, relying upon its *paramount* and *exclusive* right of control of such subjects of interstate commerce as are national in character?

After the decision in the *Wheeling Bridge case*, "Congress in the exercise of its constitutional authority to regulate commerce, legalized the structure, by a legislative enactment" (*The Wheeling Bridge*, 18 How. 421). This Court, in holding that by reason of the act of Congress its previous decree could not be enforced, said (p. 430):

So far, therefore, as this bridge created an obstruction to the free navigation of the river, in view of the previous acts of Congress, they are to be regarded and modified by this subsequent legislation; and although it still may be an obstruction in fact, is not so in the contemplation of law.

In *Newport and Cincinnati Bridge Co. v. United States*, 105 U. S. 470, a bridge across the Ohio River between Newport and Cincinnati had been authorized, both by an act of Congress and by acts of the Ohio and Kentucky Legislatures, which required the bridge company to comply with the regulations of Congress. Congress later withdrew its assent. The right of Congress to do this was upheld. This Court said:

It can not be denied that but for the act of 1871 [16 Stat. at L., 572], a bridge built according to the original plan would have

been a lawful structure which the Company could have maintained until Congress withdrew its assent, or required alterations to be made. The paramount power of regulating bridges that affect the navigation of the navigable waters of the United States is in Congress. It comes from the power to regulate commerce with foreign Nations and among the States.

* * * * *

That the Ohio is one of the navigable rivers of the United States must be conceded. It forms a boundary of six States and the commerce upon its waters is very large.

No question can arise in this case upon what the States have done, for both Ohio and Kentucky required the Company to comply with the regulations of Congress.

* * * * *

We conclude that the withdrawal by Congress of its assent to the maintenance of the bridge, when properly made, is, for all the purposes of this case, equivalent to a positive enactment that from the time of such withdrawal the further maintenance of the bridge shall be unlawful, notwithstanding the legislation of the several States, upon the subject. If modifications are directed, assent is, in legal effect, withdrawn, unless the required changes are made. (Pp. 475-6, 479.)

In *Miller v. Mayor of New York*, 109 U. S. 385, was involved the lawfulness of the Brooklyn Bridge. In that case the facts showed that not only the authority of the New York Legislature but also of

Congress had been obtained. Because of its connection with Long Island Sound, the East River may be regarded as an interstate water.

In *Covington & Cincinnati Bridge Co. v. Kentucky*, 154 U. S. 204, this Court held that Kentucky had no power "to regulate tolls upon a bridge connecting it with another state, without the assent of Congress."

The authority of the state, so frequently recognized by this court, to fix tolls for the use of wharves, piers, elevators, and improved channels of navigation, has always been limited to such as were exclusively within the territory of a single state, thus affecting interstate commerce but incidentally, and cannot be extended to structures connecting two states without involving a liability of controversies of a serious nature (p. 221).

In *Kansas City, S. R. Co. v. Kaw Valley Drainage Dist.*, 238 U. S. 75, the Kansas court, on petition of the Drainage District, had ordered the railroad company to remove its bridges across the Kansas River. It appeared that in 1903 the river had overflowed its banks, flooded a large part of Kansas City, Kansas, and caused great loss, and that the railroad company's bridges on account of their elevation had caused the river to overflow. Referring to the judgment of the Kansas court, this Court said (p. 78):

They are out-and-out orders to remove bridges that are a necessary part of lines of commerce by rail among the states. But that subject matter is under the exclusive control of Congress and is not one that it has

left to the states until there shall be further action on its part. The freedom from interference on the part of the states is not confined to a simple prohibition of laws impairing it, but extends to interference by any ultimate organ.

Further citation and analysis of cases bearing on this question would be superfluous. Fundamentally we are dealing with the same question which arose in *Gibbons v. Ogden*, 9 Wheat. 190, where it was held once and for all time that a state might not interfere with a subject of interstate navigation national in character, even by an act taking place within its own borders. Other familiar authorities to the same effect are *Brown v. Maryland*, 12 Wheat. 419; *Henderson v. Mayor of New York*, 92 U. S. 259; *Hall v. DeCuir*, 95 U. S. 485; *Lord v. Goodall, etc., Steamship Co.*, 102 U. S. 541; *Gloucester Ferry Co. v. Pennsylvania*, 114 U. S. 196; *Philadelphia & S. Mail S. S. Co. v. Pennsylvania*, 122 U. S. 326; and *Sault Ste. Marie v. International Transit Co.*, 234 U. S. 333.

Appellant, by diverting the equivalent of a large navigable river from a fork of the Chicago River, is creating a result which is national in scope. It is just as surely regulating what boats may navigate the St. Clair River and the other critical points of Great Lake Navigation and what boats may enter the various harbors and trade at the various docks as if it were enforcing a law forbidding boats of a certain draft from trading on the Great Lakes. While pretending to concede the power of Congress

to regulate, it nullifies the power by abstracting the thing to be regulated.

Returning, in conclusion, to the fundamental distinction which has been made by this Court between matters local and matters national in character, we submit that the subject of the levels of the Great Lakes does not *permit* of diversity of treatment according to the local requirements of cities on their shores. What Chicago can do so can Milwaukee, Toledo, and Cleveland. As was stated by this Court in the case of *Pennsylvania v. West Virginia*, 262 U. S. 558 (p. 596):

The question is an important one; for what one state may do others may, and there are ten states from which natural gas is exported for consumption in other states.

That the subject will admit "only of one uniform system or plan of regulation" must be apparent from the fact that the depths of harbors, locks, and other improvements which have been and will be undertaken at great expense in the Great Lakes—whether by the United States, the state, or private individuals—necessarily depend on trustworthy calculations as to the depths of the lakes and on confidence that the levels will be maintained by a paramount authority. The matter can not be left to the conflicting requirements of local conditions.

D

Under the compact contained in article 4 of the ordinance of 1787, Illinois may not interfere with or decrease the navigable capacity of Lake Michigan or any of the other Great Lakes

To quote from the opinion of this Court in *Economy Light & Power Co. v. United States*, 256 U.S. 113, 118:

The public interest in navigable streams of this character in Illinois and neighboring states, and the Federal authority over such as are capable of serving commerce among the states, does not arise from custom or implication, but has a very definite origin. By article 4 of the compact in the Ordinance of July 13, 1787, for the government of the territory northwest of the river Ohio, it was declared: "The navigable waters leading into the Mississippi and Saint Lawrence, and the carrying places between the same, shall be common highways, and forever free, as well to the inhabitants of the said territory as to the citizens of the United States, and those of any other states that may be admitted into the Confederacy, without any tax, impost, or duty therefor." (1 Stat. at L. 51, 52, note; U. S. Rev. Stat. 1878, ed. pp. 13, 16.)

The effect of this compact was held to be as follows:

To the extent that it pertained to *internal affairs*, the Ordinance of 1787—notwithstanding its contractual form—was no more than a regulation of territory belonging to the United States, and was superseded by the admission of the state of Illinois into the

Union "on an equal footing with the original states in all respects whatever" (p. 120).

* * * * *

But, so far as it established public rights of highway in navigable waters capable of bearing commerce from state to state, it did not regulate internal affairs alone, and was no more capable of repeal by one of the states than any other regulation of interstate commerce enacted by the Congress, being analogous in this respect to legislation enacted under the exclusive power of Congress to regulate commerce with the Indian tribes. (p. 120).

In the *Wheeling Bridge Case*, 13 How. 518, 565-6 this Court gave the same interpretation to a similar compact between Virginia and Kentucky.

Congress have not declared in terms that a state, by the construction of bridges, or otherwise, shall not obstruct the navigation of the Ohio, but they have regulated navigation upon it, as before remarked, by licensing vessels, establishing ports of entry, imposing duties upon masters and other officers of boats, and inflicting severe penalties for neglect of those duties, by which damage to life or property has resulted. And they have expressly sanctioned the compact made by Virginia with Kentucky, at the time of its admission into the Union, "that the use and navigation of the River Ohio, so far as the territory of the proposed State, or the territory that shall remain within the limits of this Commonwealth lies thereon, shall be free and common to the citi-

zens of the United States." Now, an obstructed navigation can not be said to be free.

* * * * *

This compact, by the sanction of Congress, has become a law of the Union. What further legislation can be desired for judicial action?

On the other hand, in such cases as *Escanaba & Lake Michigan Transportation Co.*, 107 U. S. 678; *Cardwell v. American River Bridge Co.*, 113 U. S. 205; *Huse v. Glover*, 119 U. S. 543; *Hamilton v. Vicksburg, Shreveport and Pacific R. R. Co.*, 119 U. S. 280; *Sands v. Manistee River Improvement Co.*, 123 U. S. 288; and *Willamette Iron Bridge Co. v. Hatch*, 125 U. S. 1, this court held the compact inapplicable to obstructions over navigable waters entirely within the boundaries of a single state.

We submit that the principle to be extracted from these cases is that where the obstruction or restriction of navigability is of a *state* navigable water, the compact does not apply; where it is of an *interstate* navigable water such as the Ohio River or the Great Lakes, the compact is, and has always been in force. It is true that the Economy Light & Power Co. case involved an obstruction to what was before 1890 a *state* navigable water (i. e., the Desplaines River); yet Congress had by its Acts of 1890 and 1899 extended its paramount control to such waters, and they had therefore become to that extent *interstate* navigable waters.

E

The subject of the levels of and diversion of waters from the Great Lakes is necessarily national because international in character and therefore subject to the exclusive control of Congress.

Under our Point I we call attention to the decisions of this Court relating to the international character of those of the Great Lakes which are boundary waters. (Supra, pp. 125-128.) They have been held subject to admiralty jurisdiction (*The Propeller Genesee Chief*, 12 How. 443); they have been held to be "high seas" (*United States v. Rodgers*, 150 U. S. 249) and navigation on them was held not to constitute "inland navigation" (*Moore v. American Transportation Co.*, 24 How. 1). The matter of their levels has been held to be "of international consideration." (*United States v. Chandler-Dunbar Water Power Co.*, 229 U. S. 53.)

These lakes are in truth inland seas. Different states border on them on one side, and a foreign nation on the other. A great and growing commerce is carried on upon them between different states and a foreign nation, which is subject to all the incidents and hazards that attend commerce on the ocean. (*The Propeller Genesee Chief*, 12 How. 443, 453.)

As was said by this Court in *Lord v. Goodall, etc., Steamship Co.*, 102 U. S. 541, (p. 544).

Navigation on the high seas is necessarily national in its character. Such navigation is clearly a matter of "external concern" affecting the nation as a nation in its external affairs. It must therefore be subject to the national government.

In *Henderson v. Mayor of New York*, 92 U. S. 259, this Court held invalid a statute imposing onerous conditions upon the master of every vessel arriving in the Port of New York from foreign ports or other states. We quote from the opinion (p. 273):

A regulation which imposes onerous, perhaps impossible, conditions on those engaged in active commerce with foreign nations must of necessity be national in its character. It is more than this; for it may properly be called "international." It belongs to that class of laws which concern the exterior relation of this whole nation with other nations and governments. If our government should make the restrictions of these burdens on commerce the subject of a treaty, there could be no doubt that such a treaty would fall within the power conferred on the President and the Senate by the Constitution. It is, in fact, in an eminent degree, a subject which concerns our international relations, in regard to which foreign nations ought to be considered and their rights respected, whether the rule be established by treaty or by legislation.

It is equally clear that the matter of these statutes may be and ought to be the subject of a uniform system or plan.

In this connection we call attention to the following discussion of the specific subject under consideration (i. e., diversions of international waters) in the recent work of Charles Cheney Hyde on International Law:

The diversion of the waters of an international stream for any purposes, such as those

of sanitation, navigation, power or irrigation, tends to interfere with the fullest use of the river by all riparian proprietors. There may be said to be an essential conflict between the interest of the stream as a whole, and that of the particular State diverting its waters. Where a river traverses or serves as the boundary of the territories of several States, the existence of the river interest, as such, becomes the more apparent, because of the common concern of all in its welfare.

* * * * *

In the case of a navigable river a special element projects itself which at once opposes any unrestricted taking of water serving to diminish the depth of channels of navigation and thus to impair their value. Any duty imposed upon a riparian State, either by international law or by contract, to maintain the navigability of an international river, implies an obligation also to check within places subject to the control of such State the commission of any acts which, unless restricted, would prove injurious to navigation generally. This obligation would seem to render improper the tolerance of any diversion productive of such an effect even though it should occur at a point where the river ceased to be navigable and lay wholly within the domain of the acquiescent territorial sovereign. (Vol. I, pp. 313-316.)

The international character of the appellant's proposed diversion of water has been understood and emphasized frequently by the officers of the United

States familiar with the matter. (See Appellant's Narrative, 469-471.) It was emphasized in the Report of the Board of Engineers on August 16, 1895. (Rec. Vol. VI, pp. 3931-3940.) It was mentioned by Major Marshall in his report to the Chief of Engineers on April 24, 1899 (Rec. Vol. VI, p. 3586), before the appellant was given its first permit to divert water. In the ruling of the Secretary of War on March 14, 1907, in which he refused appellant's application for a permit to reverse the flow of the Calumet River and divert water from Lake Michigan through it, the Secretary of War stated:

Added to this, is the international complication which is likely to arise in the threatened lowering of the lake level in the ports and harbors and canals of Canada * * * It may be fortunate that circumstances now require submission of this question of capital and national importance to the Congress of the United States. (Rec. Vol. VII, p. 25.)

In the decision of the Secretary of War of January 8, 1913, denying appellant's application for an increased diversion, he stated:

The question therefore becomes not merely national but international. (Rec. Vol. VII, pp. 7-17; Appellant's Narrative, p. 36.)

This view of the Secretary of War had an ample basis in the hearing which had taken place before him, for representatives of a foreign government and of foreign interests were strenuously opposing the appellant's application and made an imposing showing of serious injury to their interests.

Finally and, we submit, conclusively, the President of the United States and Congress have recognized the question as having an international character, affecting the United States in its external relations, by participating in the creation, organization, investigations and reports of the International Waterway Commission, and by negotiating and entering into the Canadian Boundary Waters Treaty of January 11, 1909. We discuss the provisions of this treaty elsewhere (*infra*, pp. 226, 305) and shall not dwell on them here. That treaty, we believe, just as certainly and effectively as a positive act of Congress, forbids the unauthorized diversion of waters by the appellant, and even permits the Canadian Government to complain of the authorized diversion of 4167 c. s. f. if it should prove injurious to navigation on the Canadian side of the boundary waters. The treaty, also, by its prohibition of the placing of submerged weirs and dams as compensating works without the approval of the International Joint Commission, an international tribunal, manifests the absurdity of appellant's contention that it should receive a *permit* from the Federal *judiciary* to take 10,000 c. s. f. on condition that it pay for the construction and maintenance of such weirs.

III

Whatever may have been the case prior to 1890, Congress assumed control of the subject of obstructions to the navigable capacity, and modifications of the course, condition, and capacity, of all navigable waters of the United States by its act of September 19, 1890, and even more extensively by its act of March 3, 1899.

Whether or not, in the absence of an assertion of its paramount control by Congress, the appellant might lawfully have obstructed the navigable capacity of the Great Lakes, such an assertion of control *was* made in unmistakable terms by the Acts of Congress of September 19, 1890 (26 St. at L. 454), and of March 3, 1899 (30 St. at L. 1151). Inasmuch as the provisions of the Act of 1890, though partially repealed by the Act of 1899, throw some light on the meaning and scope of the later statute, we shall first set forth the applicable portions of the Act of 1890.

Section 7 of the Act of 1890 provided in part:

It shall not be lawful hereafter * * * to excavate or fill, or in any manner to alter or modify the course, location, condition or capacity of the channel of said navigable water of the United States, unless approved and authorized by the Secretary of War.

Section 10 of the Act of 1890 provided in part:

That the creation of any obstruction, not affirmatively authorized *by law*, to the navigable capacity of any waters, in respect of which the United States has jurisdiction, is hereby prohibited.

The Ninth Circuit Court of Appeals in *United States v. Bellingham Bay Boom Co.*, 81 Fed. 658 (affirming same case, 72 Fed. 585, and later affirmed by this Court; 176 U. S. 211), held that the words "affirmatively authorized by law" in Section 10 of the Act of 1890 included authorization by a state legislature where the navigable water was wholly within the boundaries of the state. Thereupon the Act of 1899 was passed, Section 10 of which replaced the above-quoted portions of Sections 7 and 10 of the Act of 1890, as follows:

That the creation of any obstruction not affirmatively authorized by Congress, to the navigable capacity of any of the waters of the United States is hereby prohibited; and * * * it shall not be lawful to excavate or fill, or in any manner to alter or modify the course, location, condition, or capacity of, any port, roadstead, haven, harbor, canal, lake, harbor of refuge, or enclosure within the limits of any breakwater, or of the channel of any navigable water of the United States, unless the work has been recommended by the Chief of Engineers and authorized by the Secretary of War prior to beginning the same.

It would seem that a mere reading of the above-quoted statutory provisions is all that is necessary to demonstrate that the appellant's acts were in violation of the Act of 1899 and would have been in violation of the Act of 1890 if that act were in force. In this connection, it should be remembered that prior to the enactment on March 3 of the Act of 1899 appel-

lant had done nothing affecting in the slightest any navigable waters of the United States except the accomplishing of certain improvements in the Chicago River. These improvements were made under permits of the Secretary of War expressly reciting:

That this authority shall not be interpreted as approval of the plans of the Sanitary District of Chicago to introduce a current into Chicago River. This latter proposition must hereafter be submitted for consideration. (Appellant's Narrative, p. 474; Rec. Vol. VIII, p. 122.)

The mere excavation of a ditch in the interior of a state is of no concern to the Federal Government. The diversion of water by appellant, so far as it was lawful, was under the permit of May 8, 1899, and was not accomplished until January 17, 1900. Until January 17, 1900, therefore, the appellant did nothing affecting either the navigable capacity, the location, the condition, or the course of any navigable water of the United States. Its acts must be judged under the provisions of the Act of 1899.

Can there be any doubt that *since* the enactment of the Act of 1899—

(1) The appellant has created an obstruction to the navigable capacity of navigable waters of the United States—

(a) By lowering the levels of the Great Lakes, their connecting waters, and the St. Lawrence River.

(b) By introducing into the Chicago River an unduly rapid current, dangerous to navigation.

(2) The appellant has modified the course, location, condition, and capacity of navigable waters of the United States—

(a) By lowering the levels of the Great Lakes, their connecting waters, and the St. Lawrence River, whether or not the lowering be sufficient to obstruct.

(b) By introducing into the Chicago River an increased current, whether or not it be dangerous to navigation.

(c) By diverting into the Mississippi Basin waters which would naturally flow into the St. Lawrence basin.

(d) By increasing the amount of water flowing down the Desplaines, Illinois, and Mississippi Rivers.

(e) By reversing the course of the Calumet River. Even if this Court should be of the opinion that the lowering of the Great Lakes by several inches and the increased current in the Chicago River do not constitute *obstructions* within the meaning of the first clause of Section 10, they, and the other acts above listed under (2), constitute violations of the last clause of that section.

Nor, as a matter of fact, is there room for doubt that if the applicable provisions of the Act of 1890 were in force, the appellant would be violating those provisions. (1) Appellant would be violating Section 10 of that Act forbidding obstructions. The construction given by this Court to the words "affirmatively authorized by law" does not assist appellant, for a state legislature never had the power or right to authorize obstructions to waters like Lake Michigan, not wholly within the state's boundaries.

(2) Appellant would be violating Section 7 of that Act forbidding modifications of the condition, etc., of navigable waters. No exception was made in Section 7 for acts authorized by state legislatures; in *every* case the approval and authorization of the Secretary of War was required.

Although the statutes themselves seem to us to answer every contention made by appellant, we shall nevertheless review the decisions bearing on the interpretation and application of these statutes. We shall reserve for separate consideration in our Point IV certain particular points made by appellant as to whether the acts of appellant created an *obstruction* or a *modification*; in our Points V and VI we shall meet the claim of appellant that its acts *have* been authorized by Congress and the Secretary of War.

A

In all decisions on the subject prior to these acts of Congress, even where the State's act was upheld as a legitimate exercise of its police power, this court has expressly recognized that when Congress should see fit to act the authority of the State came to an end.

Under subheadings B and C of our Point II (supra, pp. 35 to 136) we have discussed in another connection the long line of cases beginning with *Willson v. Black Bird Creek Marsh Company*, 2 Pet. 245, which, in the absence of legislation by Congress, upheld the power of the State to create certain obstructions to the navigable capacity of navigable waters entirely within their boundaries and to regulate purely local matters in their ports on interstate navigable waters. The purposes for which the States might formerly exercise this limited power were varied

but in a general way they all came within the scope of the police power. In some cases it was for the protection of public health (*Willson v. Black Bird Creek Marsh Company*, 2 Pet. 245; *Morgan's, etc., Co. v. Louisiana Board of Health*, 118 U. S. 455); in some cases it was for furthering of commerce in saw-logs, etc. (*Pound v. Turck*, 95 U. S. 459); in some cases it was for improvement of rivers or harbors (*Mobile County v. Kimball*, 102 U. S. 691; *Sands v. Manistee River Improvement Co.*, 123 U. S. 288); in some cases it was for public convenience and commerce crossing a bridge (*Gilman v. Philadelphia*, 3 Wall. 724; *Escanaba & Lake Michigan Transportation Co. v. Chicago*, 107 U. S. 683). We know of no case in which the object of the State's act, if held lawful, was not referable to its police power.

In every such case, in *express* language, a reservation was made: when Congress saw fit to legislate on the subject the authority of the State ceased, and any act, by legislation or by any ultimate organ, in conflict with the assertion of control by Congress, would be void and unlawful.

B

By its acts of 1890 and 1899 Congress made an effectual assertion of its paramount control over all navigable waters of the United States and assumed jurisdiction of the subjects mentioned in the above heading.

In *United States v. Rio Grande Dam & Irrigation Co. et al.*, 174 U. S. 690 (reversing 51 Pac. 674), this court, speaking through Mr. Justice Brewer, said (p. 708):

It is true there have been frequent decisions recognizing the power of the state in the ab-

sence of congressional legislation to assume control of even navigable waters within its limits to the extent of creating dams, booms, bridges, and other matters which operate as obstructions to navigability. The power of the state to thus legislate for the interests of its own citizens is conceded, and until in some way Congress asserts its superior power and the necessity of preserving the general interests of the people of all the states, it is assumed that state action, although involving temporarily an obstruction to the free navigability of a stream, is not subject to challenge. A long list of cases to this effect can be found in the reports of this court. See, among others, the following: *Wilson v. Black Bird Creek Marsh Co.*, 2 Pet. 245; *Gilman v. Philadelphia*, 3 Wall. 713; *Escanaba Co. v. Chicago*, 107 U. S. 678; *Willamette Iron Bridge Co. v. Hatch*, 125 U. S. 1.

After discussing certain Acts of Congress (14 St. at L. 253, Chap. 262 and 26 St. at L. 1101), the court said (p. 707):

But whatever may be said as to the true intent and scope of these various statutes, we have before us the legislation of 1890. On September 19, 1890, an act was passed containing this provision (26 Stat. at L. 454, sec. 10).

The court then quotes Sec. 10 and proceeds (pp. 707-708):

As this is a later declaration of Congress, so far as it modifies any privileges or rights conferred by prior statutes, it must be held controlling, at least as to any rights attempted to be created since its passage; and all the pro-

ceedings of the appellees in this case were subsequent to this act. This act declares that "the creation of any obstruction, not affirmatively authorized by law, to the navigable capacity of any waters in respect to which the United States has jurisdiction, is hereby prohibited." Whatever may be said in reference to obstructions existing at the time of the passage of the act, under the authority of state statutes, it is obvious that Congress meant that thereafter no state should interfere with the navigability of a stream without the condition of national assent. It did not, of course, disturb any of the provisions of prior statutes in respect to the mere appropriation of water of non-navigable streams in disregard of the old common-law rule of continuous flow, and its only purpose, as is obvious, was to affirm that as to navigable waters nothing should be done to obstruct their navigability without the assent of the national government. It was an exercise by Congress of the power, oftentimes declared by this court to belong to it, of national control over navigable streams, and various sections of this statute, as well as in the act of July 13, 1892 (27 Stat. at L. 88, 110), provide for the mode of asserting that control. It is urged that the true construction of this act limits its applicability to obstructions in the navigable portion of a navigable stream, and that as it appears that although the Rio Grande may be navigable for a certain distance above its mouth, it is not navigable in the territory of New Mexico, this statute has no applicability. The lan-

guage is general, and must be given full scope. It is not a prohibition of any obstruction to the navigation, but any obstruction to the navigable capacity; and anything, wherever done or however done, within the limits of the jurisdiction of the United States, which tends to destroy the navigable capacity of one of the navigable waters of the United States, is within the terms of the prohibition. Evidently Congress perceiving that the time had come when the growing interests of commerce required that the navigable waters of the United States should be subjected to the direct control of the national government, and that nothing should be done by any State tending to destroy that navigability without the explicit assent of the national government, enacted the statute in question. And it would be to improperly ignore the scope of this language to limit it to the acts done within the very limits of navigation of a navigable stream.

See also *Lake Shore & Michigan Southern Ry. Co. v. Ohio*, 165 U. S. 365; *United States v. Bellingham Bay Boom Co.*, 176 U. S. 211; *Cummings v. Chicago*, 188 U. S. 410; *Union Bridge Co. v. United States*, 204 U. S. 364; *Philadelphia Co. v. Stimson, Secretary of War*, 228 U. S. 635; *United States v. Chandler-Dunbar Water Power Co.*, 229 U. S. 53.

In *Economy Light & Power Co. v. United States*, 256 U. S. 113 (affirming 256 Fed. 792), this court said:

But, as was recognized in the *Gilman* case [*Gilman v. Philadelphia*, 3 Wall. 781], Congress may exercise its authority through general as well as through special laws, its power

in either case being supreme. The Act of 1899 * * * is a due assertion of the authority of Congress over all navigable waters within its jurisdiction; and it must be accorded due weight as such (p. 121).

In *Southern Pacific Company et al. v. Olympian Dredging Company*, 260 U. S. 205, 207-208 this court said:

By the Act of September 19, 1890 (26 Stat. at L. 453, 454, chap. 907), Congress inaugurated a new policy of general, direct control over the navigable waters of the United States.

* * * * *

By this legislation Congress assumed jurisdiction of the subject of obstructions to navigation, and committed to the Secretary of War administrative power in so far as administration was necessary.

No point is made by appellant as to the constitutionality of these Acts of Congress. Any possible contention that there has been an undue delegation of power to the Secretary of War is effectively met by the decisions of this Court in such cases as *Union Bridge Co. v. United States*, 204 U. S. 364; *Philadelphia Co. v. Stimson, Secretary of War*, 223 U. S. 635.

C

The effect of Section 10 of the Act of 1899 is to make the creation of such obstructions or modifications dependent "upon the concurrent or joint assent of both the national Government and the State government"

We have already pointed out the interpretation given by this Court to the words "affirmatively authorized by law" as they appear in Section 10 of the Act of 1890 in *United States v. Bellingham Bay Boom Co.*, 176 U. S. 211 (*supra*, p. 193). The same

interpretation was given the words as they appeared in another section of the Act of 1890 in *Lake Shore & Michigan Southern R. Co. v. Ohio*, 165 U. S. 365. Incidentally, it may be noted that in the *Bellingham Bay Boom Co. case*, this Court held the obstruction unlawful, for the evidence showed that it was not even authorized by the Act of the Oregon Legislature. That the words "affirmatively authorized by law" did not cover obstructions caused within the state but affecting navigable capacity of waters outside the state is clear from the opinion of this Court in *United States v. Rio Grande Dam & Irrigation Co.*, 174 U. S. 698. In that case, which arose under Section 10 of the Act of 1890, the unlawful act consisted of diverting the water of a *nonnavigable* river in the Territory of New Mexico with a harmful result to the navigable capacity of that river in its navigable portion *outside* the Territory. The fact that New Mexico was not a state is immaterial; the act of its legislature was just as lawful or unlawful as authorization for the dam.

There is, therefore, no doubt as to the meaning and intent of the words "affirmatively authorized by Congress" as they appear in Section 10, of the Act of 1899. An act of the state legislature can not authorize an obstruction to the navigable capacity of a navigable water of the United States whether within or without the boundaries of the state. There must be Federal authority. That it must be an Act of Congress in the case of an obstruction, and not

merely the authorization of the Secretary of War, is shown under our next subheading.

The question then arose in *Cummings v. Chicago*, 188 U. S. 410, as to whether the words "affirmatively authorized by Congress" in Section 10 of the Act of 1899 were intended (p. 428)—

to supersede, for every purpose, the authority of Illinois over the erection of structures in navigable waters wholly within its limits? Did it intend to declare * * * that the assent of the Secretary of War, proceeding under the above acts of Congress, was alone sufficient to authorize such structures?

In that case *Cummings*, having obtained the recommendation of the Chief of Engineers and a permit from the Secretary of War, proceeded to construct a dock in the Calumet River. An ordinance of the City of Chicago, enacted under power duly delegated it by the Illinois Legislature, required the permission of its department of public works as a condition precedent to the construction of any dock within the limits of the city. This Court, in holding that the state's authority had not been superseded to that extent, said (pp. 430-31):

But we will not at this time make any declaration of opinion * * * as to the extent to which Congress may go in the matter of the erection or authorizing the erection of docks and like structures in navigable waters that are entirely within the territorial limits of the several states. Whether Congress may, against or without the expressed will of a state, give

affirmative authority to private parties to erect structures in such waters, it is not necessary in this case to decide. It is only necessary to say that the act of 1899 does not manifest the purpose of Congress to go to that extent under the power to regulate foreign and interstate commerce and thereby to supersede the original authority of the states. *The effect, of that Act, reasonably interpreted, is to make the erection of a structure in a navigable river, within the limits of a state, depend upon the concurrent or joint assent of both the national government and the state government.* The Secretary of War, acting under the authority conferred by Congress, may assent to the erection by private parties of such a structure. Without such assent the structure can not be erected by them. But under existing legislation they must, before proceeding under such an authority, obtain also the assent of the state acting by its constituted agencies.

Montgomery v. Portland, 190 U. S. 89, involved an identical situation with regard to the Willamette River in Oregon, and, in the words of the opinion, "this case can not be distinguished in principle from *Cummings v. Chicago*." A third case applying the same principles is *North Shore Boom & Driving Company v. Nicomen Boom Company*, 212 U. S. 406, involving the lawfulness of a boom in the North River, a river wholly within the boundary of the state of Washington. The boom was in violation of the laws of Washington; it did not appear whether or not the Boom Company had complied with the Federal stat-

ute. This Court, after quoting the first portion of Section 10 of the Act of 1899, said (p. 413):

It leaves out the words "not affirmatively authorized by law," and substitutes "not affirmatively authorized by Congress." There is, therefore, no reference to state action or state law. Obstruction not affirmatively authorized by Congress is prohibited, but the case of the state assent remains with the state for its sole adjudication.

The construction of the boom of defendant in this case, the state court has decided, was not authorized by the state. Whether it was or not is not a Federal question.

A further application of the same principle is found in *Port of Seattle v. Oregon & Washington R. Co.*, 255 U. S. 56, in which this Court said (pp. 69-70):

So far as the pierhead lines are concerned, the railroad concedes that their establishment by the United States did not create, as against the state, a right to wharf out. They merely fixed the line beyond which piers might not extend. * * * And the power of the United States in this respect was not exhausted by its first exercise. [Citing *Philadelphia Co. v. Stimson*, 223 U. S. 605.] The lines so fixed, although acted upon by the erection of piers, could be changed by the United States at any time. [Citing *Greenleaf Johnson Lumber Co. v. Garrison*, 237 U. S. 251.]

The case of *International Bridge Co. v. New York*, 254 U. S. 126, involves a very different situation. The bridge was erected in 1874, under authority of an

Act of Congress, between Squaw Island in the Niagara River and the mainland of New York State. The state of New York brought suit against the Bridge Company to recover penalties for failure to place upon the bridge a roadway for vehicles and a pathway for pedestrians. This Court said (p. 132):

The part of the structure with which we are concerned is within the territorial jurisdiction of the state of New York. There was no exercise of the power of eminent domain by the United States. The state was the source of every title to that land, and, apart from the special purposes to which it might be destined, of every right to use it. Any structure upon it, considered merely as a structure, is erected by the authority of New York.

The case had nothing to do with the bridge as an obstruction of the navigable capacity of the Niagara River.

What encouragement appellant can extract from any of these cases is beyond our comprehension. *None* of them holds that state authority alone is sufficient for the creation of an obstruction or a modification of the condition of a navigable water of the United States. All of them have expressly held that Federal assent, either by Act of Congress or authorization from the Secretary of War (depending on the character of the proposed act) is a necessary condition precedent. Why cases such as *Cummings v. Chicago* should have been cited to any other effect we are unable to understand.

Under Section 10 of the act of 1899 an act of Congress is necessary to authorize the creation of an obstruction to the navigable capacity of a navigable water of the United States; for a modification of the condition, etc., of such navigable water, not amounting to an obstruction, the recommendation of the Chief of Engineers and the authorization of the Secretary of War is necessary

Apparently counsel for appellant contend that, in the face of the seemingly explicit language of Section 10 of the Act of 1899, an act of Congress is not necessary to authorize the creation of an obstruction to the navigable capacity of a navigable water of the United States; that power has been delegated to the Secretary of War to authorize any and all manner of obstructions, and that all that is necessary to legalize an obstruction is a permit from him following a recommendation by the Chief of Engineers. (See Appellant's Brief, Point II, particularly pp. 131-139.)

What advantage this surprising contention, even if tenable, would bring to appellant is hard to understand, for appellant has never had either the recommendation of the Chief of Engineers or a permit from the Secretary of War to divert more than a limited amount of water, which, since March 31, 1903, has been a maximum of 4,167 c. s. f. Appellant is, of course, arguing that certain permits granted it for the making of improvements in the Chicago River are permits to take 10,000 c. s. f. and, indeed, an unlimited amount of water. This is in spite of express recitals in those permits negating any such interpretation. This we shall discuss in our Point VI, however. (Infra, pp. 241-242.)

We submit that, without doing shocking violence both to the English language and to fundamental rules of grammar and syntax, the applicable portions of Section 10 can be read to mean only the following:

(1) The creation of any obstruction to the navigable capacity of a navigable water of the United States must be affirmatively authorized by Congress; e. g., there must be an act of Congress, general or special, authorizing the obstruction.

(2) A modification of the course, location, condition, or capacity of any navigable water of the United States, when *not* amounting to an obstruction, must, to be lawful, be recommended by the Chief of Engineers and authorized by the Secretary of War.

A bridge or any other structure may or may not be an obstruction. An example of this is the *Wheeling Bridge case*, 13 How. 518. With its span at ninety feet the bridge was held to be an obstruction; the Bridge Company was directed by decree of this Court to elevate it to one hundred and eleven feet, a height at which it would not be an obstruction. There can be no doubt, however, but that Federal assent would be necessary to construct such a bridge, no matter how high, under existing legislation.

So with a modification of the condition or capacity of a navigable water. A lowering of the lake levels of five inches may, and under the evidence in this case does, amount to an obstruction. A lesser lowering such as would be caused by the authorized diversion of 4,167 c. s. f. might not be enough to constitute

an obstruction. Both situations are covered by Section 10, the one requiring an act of Congress and the other requiring *at least* the recommendation of the Chief of Engineers and the authorization of the Secretary of War. As a matter of fact, Congress has power to declare all modifications to be obstructions. (See cases cited under our next subheading, pp. 214 to 217.) Whether or not it has done so by Section 10, however, it is unnecessary to decide.

The interpretation we have placed upon the statute was given expression in *Hubbard v. Fort*, 188 Fed. 987, in which the Circuit Court in the District of New Jersey said (pp. 992-993):

So far as applicable to the present question, such section (10) may be summarized thus: First, the creation of any *obstruction* to the navigable capacity of any waters of the United States is prohibited unless affirmatively authorized by Congress; second, it shall not be lawful to build any *structure* in a navigable river or water of the United States, except on *plans recommended* by the Chief of Engineers and *authorized* by the Secretary of War; and, third, it shall not be lawful to excavate or fill the channel of any navigable water of the United States unless such work is recommended by said Secretary of War prior to beginning the same. [If literally exact, the last clause should have read "recommended by the Chief of Engineers and authorized by the Secretary."]

The case of *West Chicago Street Ry. Co. v. Illinois, etc.*, 201 U. S. 506, declared a specific permit from the Secretary unnecessary only because the act (30 Stat. 1153) provided that a specific improvement of the Chicago River, involved in that case, should be at the expense of the city, and this provision of the statute was held an implied permit by Congress for this specific work, dispensing with the necessity of further authority from the Secretary under Section 10 of the act (p. 527).

The construction we contend for is supported by considerations drawn from other sections of the Act of 1899 and by the interpretation given by this Court to the Act of 1890. We do not pretend to understand just what message is intended to be conveyed by appellant's elaborate dissection of the two statutes. (Appellant's Brief, pp. 133-136.) It does not require much discernment, however, to discover that counsel for appellant have taken desperate liberties with the facts of the instant case in an endeavor to bring them within the views apparently held by the Supreme Court of Maine in *Maine Water Company v. Knickerbocker Steam Towing Company*, 99 Me. 473, 59 Atl. 953. For example, counsel say (Appellant's Brief, pp. 131-2):

Excavating and filling in the channels of the Chicago River and its branches was the *only* work appellant was required to do in navigable waters of the United States to accomplish and bring about the diversion. The reversal of the current and flow of the

Chicago River and its branches was a *necessary* result. * * * That includes, of course, the diversion of water *to the amount required by state authority*.

We hardly know whether to take such statements seriously or not. Are we to understand that the Chicago River simply flowed into the Sanitary & Ship Canal without the assistance of the appellant, as the necessary result of improvements made by it in the Chicago River under permits that expressly stated that they did not confer authority to divert water? Or that later permits to widen and otherwise improve the river automatically sent a current into the canal at the rate of 20,000 cubic feet per minute per 100,000 population in the district ("the amount required by state authority")? Has appellant, then, no control over the amount it is diverting? The absurdity of such a contention is self-evident.

We take the liberty of quoting further from the well-reasoned opinion in the case of *Hubbard v. Fort, supra*, in the absence of any decision of this Court having to do with the interpretation of Section 10 in this regard:

And how can it be said that the structures or the works subsequently referred to in this section may not amount to an obstruction to such navigable capacity? It is to be noted that "excavate or fill" is associated with "alter or modify the course, location, condition, or capacity of any" navigable water, all of which

may be so performed as to become serious obstructions to navigation. That such obstructions may be but slight, and that some will be of only temporary duration, would not make them any less obstructions and within the prohibition. Any less comprehensive interpretation of the first part of section 10 would do violence to its language and, as already said, be meaningless. If Congress intended that as to all other obstructions not prohibited by section 9 no affirmative action by Congress should be necessary, but that they might be constructed upon obtaining the permission of the Secretary of War it used singularly inapt and ambiguous language in expressing such intention.

* * * * *

As the law stood immediately before the act of 1899 was passed, the initial authorization of the Congress to create obstructions to the navigable capacity of an intrastate water was not necessary if state legislative authority for such construction had been obtained, and the building of wharves and other structures mentioned in the first part of section 7 of the act of 1890, in any United States navigable water, was only prohibited without the permission of the Secretary of War, if they obstructed or impaired navigation, commerce, or anchorage. The erection of bridges and their appurtenances over intrastate waters was permitted without the need of the approval of the Secretary of War, if authorized by law before the passage of said act. The excavating, filling, altering, etc., the channel

of navigable waters was permitted if approved and authorized by the Secretary of War.

Among the changes effected by the act of 1899 was to require the affirmative authorization by Congress to create any obstruction to the navigable waters of the United States, except that bridges, dams, dikes, and causeways in or across waters the navigable portions of which lie wholly within the limits of a single state were permitted if authorized by state legislation and the location and plans of such structure were approved by the chief of engineers and by the Secretary of War. Perhaps without the change from "authorized by law" to "authorized by Congress" no obstruction to the navigable capacity of interstate waters without affirmative congressional enactment would have been lawful, but a present reading of the law in the light of the history of its enactment clearly evinces to my mind a legislative purpose to require affirmative action on the part of Congress before such a crossing of interstate streams as contemplated by complainants in this suit shall be permitted, and that only when such congressional action shall have been taken can the powers delegated to the Secretary of War be put into operation. (188 Fed. 996-7, 998-9.)

The fallacy of the reasoning of the Supreme Court of Maine lies in its omission to consider that in the Act of September 19, 1890, the effect of the combined provisions of sections 7 and 10 gave the same result that it thought could not have been intended in the

later statute. The structures covered by section 7 of the earlier act could be authorized by the Secretary of War if they did not constitute obstructions. If they did, they were forbidden by Section 10 unless "affirmatively authorized by law." The conclusion of the Maine court disregards the word "affirmatively" and renders it meaningless; indeed, the result is the substitution of the word "impliedly."

E

Whether the entire navigable capacity, and whether the unmodified condition of a navigable water should be conserved for the use and safety of navigation, are questions legislative in character, and the determination of these questions by Congress is conclusive

By Section 10 of the Act of 1899 (as well as by the corresponding provisions in Sections 7 and 10 of the Act of 1890), Congress has made unlawful, not only the creation of *obstructions* to navigable capacity, but also any modification of "the course, location, condition, or capacity of any * * * navigable water of the United States." The latter may or may not actually amount to *obstructions*. That Congress has power to exercise its paramount control to this extent, and that its determination as to the extent of the exercise is conclusive, is, we submit, not open to question.

In *United States v. Chandler-Dunbar Water Power Co.*, 229 U. S. 53, this Court, speaking of the power of Congress over interstate commerce, said (p. 62):

It includes navigation and subjects every navigable river to the control of Congress. All means having some positive relation to

the end in view which are not forbidden by some other provision of the Constitution are admissible.

This Court further said (pp. 64, 65, 70):

So unfettered is this control of Congress over the navigable streams of the country that its judgment as to whether a construction in or over such a river is or is not an obstacle and a hindrance to navigation is conclusive. Such judgment and determination is the exercise of legislative power in respect of a subject wholly within its control.

* * * * *

*The conclusion to be drawn is, that the question of * * * whether the whole flow of the stream should be conserved for the use and safety of navigation, are questions legislative in character, and when Congress determined, as it did by the act of March 3, 1909, that the whole river between the American bank and the international line * * * was "necessary for the purposes of navigation of said waters and the waters connected therewith," that determination was conclusive.*

* * * * *

It is for Congress to decide what is and what is not an obstruction to navigation.

In *Southern Pacific Company et al. v. Olympian Dredging Company*, 260 U. S. 205, this Court speaking of the Acts of 1890 and 1899, quoted with approval language from the opinion in *Monongahela Bridge Co. v. United States*, 216 U. S. 177 (see *infra*, p. 189) to the same effect.

In *Philadelphia Co. v. Stimson*, 223 U. S. 605, this Court said (pp. 635, 638):

When the state of Pennsylvania established harbor lines and thus undertook to regulate the rights of navigation, its action, however effective as between the state and the riparian proprietors, was necessarily subject to the paramount power of Congress. The state lines can be conceded no permanent force, as against the will of Congress, without substituting for its constitutional authority the supremacy of the state with respect to navigable waters.

It is for Congress to decide what shall or shall not be deemed in judgment of law an obstruction of navigation. *Pennsylvania v. Wheeling & B. Bridge Co.*, 18 How. 421. And in its regulation of commerce it may establish harbor lines or limits beyond which deposits shall not be made or structures built in the navigable waters. The principles applicable to this case have been repeatedly stated in recent decisions of this court.

* * * * *

It must be concluded, therefore, that it was competent for Congress to provide for the establishment of the harbor lines in question for the protection of the harbor of Pittsburgh. It acted within its constitutional power in authorizing the Secretary of War to fix the lines.

See also *Wheeling Bridge case* (second case), 18 How. 421; *Union Bridge Co. v. United States*, 204 U. S. 364; *Gibson v. United States*, 166 U. S. 269; *Scranton v. Wheeler*, 179 U. S. 141; *Chicago, B. &*

Q. R. Co. v. Illinois, 200 U. S. 561; *West Chicago Street R. Co. v. Illinois*, 201 U. S. 506; *Hannibal Bridge Co. v. United States*, 221 U. S. 194.

The vice of appellant's contention is that it attempts to place upon the already overburdened court a heavy burden which is not justiciable but political in nature. It asks the court to usurp the political function of Congress to determine the legislative policies of the Government.

F

Congress has committed to the Secretary of War and the Chief of Engineers the administrative duty of determining whether a modification of the condition, etc., of navigable waters is such that they can approve or whether it amounts to an obstruction requiring affirmative authorization from Congress; the determination of those questions by the Secretary of War and the Chief of Engineers is conclusive.

It will be recalled that at the very outset, in granting the permit of May 8, 1899, the Secretary of War entertained grave doubt as to his power to authorize the diversion of water by appellant. This was the reason for the incorporation of the first condition in that permit, namely, that it should "be subject to such action as may be taken by Congress." The report of Major Marshall, United States Engineer at Chicago, to the Chief of Engineers of the United States, on April 24, 1899 (Rec. Vol. VI, p. 3586), confirms this and shows that the basis for the doubt was the effect of the diversion on the levels of the Great Lakes. The Chief of Engineers and the Secretary of War came to the conclusion that since the lowering from a diversion of 300,000 cubic feet per minute would not exceed three inches, they might

hazard a consent *subject* to the action of Congress. At that time there had not been any considerable investigation of the effect on the lake levels.

In 1907, however, when the subject of a further diversion by opening a new outlet through the Calumet came up, the subject of the effect on lake levels had been elaborately investigated by the United States Lake Survey and the Secretary of War and the Chief of Engineers had before them its reports and also the conclusions of the International Waterways Commission in its report of January 4, 1907. The Chief of Engineers reached the conclusion that the proposed further abstraction would—

undoubtedly lower the levels of all the waters of the Great Lakes, except those of Lake Superior, and thus diminish the navigable capacity and depth of the various channels and harbors which have been deepened and improved under authority of Congress—

and came to the conclusion that the War Department should deny the application, it being a matter for the sanction of Congress. (Rec. Vol. VII, pp. 23-25.) The Secretary of War followed the recommendation of the Chief of Engineers, as the statute required him to, and denied the application. Both the Wilmette Permit of September 11, 1907, and the Calumet Permit of June 30, 1910, were expressly conditioned on a limitation of the total withdrawal to 4167 c. s. f.

On February 5, 1912, appellant applied for permission to divert 10,000 c. s. f. There was an ex-

tended hearing. The report of Lt. Col. Zinn, Engineer in charge at Chicago (Rec. Vol. VI, pp. 3732-3737), shows the reasons for the recommendation of the Chief of Engineers against allowing the application; the reasons were substantially the same as those expressed by the Secretary of War. In his decision on January 8, 1913, denying the application, the Secretary of War came to the following conclusions (among others):

First. That the diversion of 10,000 cubic feet per second from Lake Michigan, as applied for in this petition, would substantially interfere with the navigable capacity of the navigable waters in the Great Lakes and their connecting rivers.

Second. That that being so, it would not be appropriate for me, without express congressional sanction, to permit such a diversion, however clearly demanded by the local interests of the sanitation of Chicago.

With regard to the prior permits, he said:

The propriety of obtaining congressional sanction for the project has been pointed out from the beginning; and the form in which the permit has been granted, even for the moderate amount of diversion permitted, has been so phrased as to indicate that the permission was predicated upon the absence of any substantial injury to commerce. (Rec. Vol. VII, pp. 7-17.)

The Chief of Engineers and the Secretary of War have, therefore, made a decision, after a hearing in

which there has never been a suggestion of unfairness or fraud or arbitrary action, that a diversion of more than 4,167 c. s. f. would be an obstruction to the navigable capacity of navigable waters of the United States and that, therefore, the increased diversion was one which only Congress could authorize. Certain it is that the Chief of Engineers and the Secretary of War refused to authorize it. The appellant, however, proceeded in defiance of the decision to divert an increased amount of water until it now exceeds 10,000 c. s. f.

We submit that the necessary effect of Section 10 of the Act of Congress of March 3, 1899, is to make the decision of the Chief of Engineers and the Secretary of War final. The decision of such a question by Congress is, as we have already pointed out in the preceding subheading, final as a determination of a legislative question. By Section 10 it has necessarily committed the determination of certain facts to these officers of the United States. They can recommend and authorize a modification of the condition of navigable waters if and when, after investigation by the Chief of Engineers, they find that the modification will not amount to an *obstruction*. If they find that it *will* amount to an obstruction, then the modification must await the action of Congress. Furthermore, even if there were no showing that the modification would actually amount to an obstruction, there is no duty on the part of the Chief of Engineers to recommend, or the Secretary of War to authorize, it. They may and should

be guided by what seems to be for the best interest of the United States in the preservation of the navigability of its waters.

The appellant is now asking this Court to disregard, as appellant has done, what is in effect the decision of Congress on a legislative matter. While the decision comes from the Chief of Engineers and the Secretary of War, it must be regarded as having the same force and effect as that of Congress which might unquestionably have determined the matter itself. The decisions of this Court do not, we believe, leave the matter open to doubt. In *Southern Pacific Co. et al. v. Olympian Dredging Co.*, 260 U. S. 205, this Court said (pp. 208-210):

That the Secretary of War was authorized to impose the condition heretofore quoted does not admit of doubt. The power to approve implies the power to disapprove, and the power to disapprove necessarily includes the lesser power to condition an approval. In the light of this general assumption by Congress of control over the subject and of the large powers delegated to the Secretary, the condition imposed by that officer can not be considered otherwise than as an authoritative determination of what was reasonably necessary to be done to insure free and safe navigation so far as the obstruction in question was concerned.

It was not for the petitioners, however, to question either his reasons or his conclusions. They were justified in proceeding upon the assumption that what the Secretary, in the

exercise of his lawful powers, declared to be no obstruction to navigation, was in fact no obstruction. The language which this court employed in *Monongahela Bridge Co. v. United States*, 216 U. S. 177, 195, is pertinent. "* * * Congress intended by its legislation to give the same force and effect to the decision of the Secretary of War that would have been accorded to direct action by it on the subject. It is for Congress, under the Constitution, to regulate the right of navigation by all appropriate means, to declare what is necessary to be done in order to free navigation from obstruction, and to prescribe the way in which the question of obstruction shall be determined. Its action in the premises can not be revised or ignored by the courts or by juries, except that when it provides for an investigation of the facts, upon notice and after hearing, before final action is taken, the courts can see to it that executive officers conform their action to the mode prescribed by Congress."

See also the cases cited under the preceding sub-heading. These cases meet every contention made by appellant both in its Point VIII and its Point III (c).

IV

Appellant has created and is maintaining an obstruction to the navigable capacity of navigable waters of the United States in violation of section 10 of the act of Congress of March 3, 1899

That appellant has violated and is continuing to violate the last clause of Section 10 of the Act of

1899, forbidding modification of the condition, etc. of navigable waters, hardly seems open to question. The creation of a large navigable river flowing away from Lake Michigan into the Mississippi River Basin, equal in volume to the combined flow of the Grand, Fox, and St. Joseph Rivers and substantially five per cent of the flow over Niagara Falls; the lowering of the lake levels; the increased current in the Chicago River, and other incidents—show such a violation conclusively. We shall, therefore, take no time to demonstrate what is self-evident, by discussion of the evidence in this connection.

That appellant is likewise violating the first clause of Section 10 forbidding the creation of obstructions to navigable capacity can hardly be doubted, under the evidence in this case and the decisions of this Court. In our Statement of the Case (pp. 74 to 78) we have pointed out the conclusions reached, after careful investigation and painstaking observations over a period of years, by the Chief of Engineers, the United States Lake Survey, and the International Waterways Commission as to the amount of the lowering of levels. The question was raised in the Calumet River Suit instituted in 1908 and the appellant made no effort to rebut the testimony of appellee's witnesses on this subject, all men of experience and standing. In the hearing before the Secretary of War on appellant's application for an increased diversion, which led to the Secretary's decision of January 8, 1913, and his findings as to the

effect of the diversion, the Chief Engineer for appellant said he did not wish "to question the accuracy of the figures or the fairness of the calculations." It was only after the application had been refused and the Main Channel Suit was instituted that appellant sought to discredit the figures and calculations. It sought to do so largely through the testimony of one man who was employed by appellant in connection with the litigation and therefore was not a disinterested witness, a man whose expert qualifications will not bear close scrutiny. On the basis of the data furnished by *appellee's* witnesses, this individual assumed to criticize the methods, observations, and deductions of the United States Lake Survey, the International Waterways Commission, and the testimony of a host of competent expert engineers. The superficiality of his criticisms is amply demonstrated by the evidence, and we do not feel called upon to enter upon a detailed discussion of its technical features. Even this witness, however, conceded a lowering in the lake levels of approximately two inches less than those of the appellee's most trustworthy witnesses. In the case of Lake Michigan appellant's witness conceded a lowering of 4.1 inches for a diversion of 10,000 c. s. f. (See Statement of the Case, p. 79.)

The material and substantial injury to navigation caused by each inch of lowering is, we believe, incontrovertibly established by the evidence. (See Statement of the Case, p. 94.) That we are dealing,

not with a fanciful or theoretical effect, but a concrete obstruction is perfectly apparent from the narrow margin which the larger boats have even now over critical points in the Great Lakes. It will not do to say that there should be a clearance of two feet anyway as a margin of safety. The same result follows: the draught of the boat must still be so many inches less. The same applies to the oscillations due to barometric conditions, etc.

Finally, the injury to navigation by the increased and dangerous current in the Chicago River must be considered; the Secretary of War has repeatedly indicated his view that a current of a mile and a quarter an hour is all that is consistent with safe navigation of the river. We do not believe that appellant will gainsay that it has created and is maintaining a current of a greater rapidity.

That the unauthorized acts of appellant have created an obstruction in violation of the prohibition of Section 10 of the Act of 1899 is clear from a consideration of the cases interpreting the meaning and scope of the clause in question.

A

"Anything wherever done or however done, within the limits of the jurisdiction of the United States, which tends to destroy the navigable capacity of one of the navigable waters of the United States, is within the terms of the prohibition"

The language quoted in this subheading is from the opinion of this Court in *United States v. Rio Grande Dam & Irrigation Company*, 174 U. S. 690. In that case the Irrigation Company was proceeding to construct a dam across the Rio Grande River in the

territory of New Mexico and to appropriate the waters of that stream for the purposes of irrigation. The Rio Grande River was not navigable within the limits of New Mexico, but became a navigable river at a point considerably lower down in its course. Under the issues raised by the pleadings, the facts were assumed to be that most of the flow of the river had already been appropriated by other parties and the defendant proposed to take the balance. This, according to the averment of the defendant, "would be very largely only so acquired from the excess storm and flood waters now unappropriated, useless, and going to waste." This Court said (p. 708):

It is urged that the true construction of this act limits its applicability to obstructions in the navigable portion of a navigable stream, and that as it appears that although the Rio Grande may be navigable for a certain distance above its mouth, it is not navigable in the territory of New Mexico, this statute has no applicability. The language is general, and must be given full scope. It is not a prohibition of any obstruction to the navigation, but any obstruction to the navigable capacity, and anything, wherever done or however done, within the limits of the jurisdiction of the United States which tends to destroy the navigable capacity of one of the navigable waters of the United States, is within the terms of the prohibition. Evidently Congress, perceiving that the time had come when the growing interests of commerce required that the navigable waters of the United States

should be subjected to the direct control of the national government, and that nothing should be done by any state tending to destroy that navigability without the explicit assent of the national government, enacted the statute in question. And it would be to improperly ignore the scope of this language to limit it to the acts done within the very limits of navigation of a navigable stream.

This language is, in itself, sufficient answer to the untenable position taken by appellant throughout its brief that, having widened and improved the channel of the Chicago River under its permits of July 11, 1900, so as to accommodate an increased flow, appellant was thereafter helpless to control the amount of water flowing into its canal, and was not responsible if 10,000 c. s. f. happened to go through its gates at Lockport. The words "anything wherever done or however done" seem broad enough to cover the failure and refusal of appellant to close its gates far enough to limit the flow to 4,167 c. s. f., especially in view of its acceptance of the various permits up to and including the Wilmette Permit of September 11, 1907 and the Calumet Permit of June 30, 1910, in both of which appeared the express condition that the total diversion of water from Lake Michigan should not exceed the 4,167 c. s. f. already authorized. Appellant received privileges in these permits on what must be construed to be an additional agreement on its part to observe the limitation on the diversion.

B

To constitute an obstruction neither material injury and damage to commerce nor unreasonable obstruction to navigation are necessary

Under its Point VI (b), appellant contends that the injury and damage to commerce must be *material* and the obstruction to navigation must be *unreasonable*. Both requirements are, as a matter of fact, met in the instant case. (See Statement of the Case, *supra*, pp. 70 to 106.) That appellant's contention is not the law, however, is clear from consideration of this Court's decisions in *United States v. Rio Grande Dam & Irrigation Company*, 174 U. S. 690, and *Economy Light & Power Co. v. United States*, 256 U. S. 113.

In the Rio Grande case this Court passed adversely on such a contention in saying of the language in Section 10 (p. 708):

It is not a prohibition of any obstruction to the *navigation*, but any obstruction to the *navigable capacity*.

The case was remanded, directing—

an inquiry into the question whether the intended acts of the defendants * * * will substantially diminish the *navigability* of that stream within the limits of present navigability, and if so, to enter a decree restraining those acts to the extent that they will so diminish. (p. 710.)

That the evidence in the instant case meets this requirement is shown in our Statement of the Case. We do not believe that the word "substantially" as

used by this Court in the excerpt just quoted was intended to mean more than *appreciably*, that is, in a manner in which it would have to be taken account of in estimating the navigable capacity of a water. If it be true, as appellant asserts, that harbors and other improvements built in the Great Lakes since the diversion have been calculated so as to allow for the several inches loss in level, further proof would be unnecessary. The importance of every inch in critical points in these waters is, however, proved by the practice of navigators in taking careful note of the levels in connection with loading their vessels; every loss of an inch means a loss in tonnage of some eighty tons. A matter of five or six inches is very substantial in places where, like the Poe Lock, there is a depth of only 18 to 20 feet. (Rec. Vol. VI, p. 8643.)

Appellee was under no obligation to prove material injury and damage to commerce, but, nevertheless, did so. (Statement of the Case, *supra*, pp. 94 to 106.) That this was not a necessary element in its case is clear, not only from the Rio Grande case, but also *Economy Light & Power Co. v. United States*, 256 U. S. 113. In that case the United States sought by injunction to restrain the Power Company from constructing a dam in the Desplaines River in Illinois.

The district court found that there was no evidence of actual navigation within the memory of living men, and that there would be no present interference with navigation by the building of the proposed dam. The

circuit court of appeals did not disturb this finding [168 C. C. A. 138, 256 Fed. 792, 798]. But both courts found that in its natural state the river was navigable in fact (p. 117).

* * * * *

We concur in the opinion of the circuit court of appeals that a river having actual navigable capacity in its natural state, and capable of carrying commerce among the states, is within the power of Congress to preserve for purposes of future transportation, even though it be not at present used for such commerce, and be incapable of such use according to present methods, either by reason of changed conditions or because of artificial obstructions (p. 123).

That a small variation of lake levels is *substantial* and may constitute an obstruction is confirmed by the language we have elsewhere quoted from *United states v. Chandler-Dunbar Water Power Co.*, 229 U. S. 53, (*supra*, p. 131).

Another case which may be considered in this connection is the first *Wheeling Bridge case*, 13 How. 553. As has already been pointed out, practically all the contentions here made by appellant were urged and overruled (*supra*, p. 139). See, too, the excerpt elsewhere quoted from *Hubbard v. Fort*, 188 Fed. 992 (*supra*, p. 178).

Appellant cites *Union Bridge Co. v. United States*, 204 U. S. 364. That case, however, involved a proceeding in the nature of a criminal information under Section 18 of the Act of 1899 making it the duty of the

Secretary of War to institute certain proceedings whenever he—

shall have good reason to believe that any railroad or other bridge now constructed, or which may hereafter be constructed, over any of the navigable waterways of the United States, is an *unreasonable* obstruction to the free navigation of such waters.

The insertion of the word "unreasonable" was naturally due to the conflicting interests of commerce over the bridge and under the bridge. The fact that the word was specifically employed in the case of bridges confirms our contention that it is not to be read into Section 10.

We do not comprehend in what respect the other cases cited by appellant on this subject can possibly be deemed in point.

Appellant's Point VI, (c), is substantially a paraphrasing of the point just discussed, with the additional claim that the obstruction must "*clearly exist.*" The cases chiefly relied on, *New York v. New Jersey & Passaic Valley Sewage Commissioners*, 256 U. S. 296, and *Kansas v. Colorado*, 206 U. S. 46, are readily distinguished from the instant case. The principle governing controversies between states, as expressed by this Court in the former case, as is follows (p. 309):

Before this court can be moved to exercise its extraordinary power under the Constitution to control the conduct of one state at the suit of another, the threatened invasion of rights must be of serious magnitude, and it must be

established by clear and convincing evidence.
Missouri v. Illinois, 200 U. S. 496.

The reasons for this principle are clearly set forth in
Kansas v. Colorado (pp. 97-98).

As Congress can not make compacts between the states, as it can not, in respect to certain matters, by legislation compel their separate action, disputes between them must be settled either by force or else by appeal to tribunals empowered to determine the right and wrong thereof. Force, under our system of government, is eliminated. The clear language of the Constitution vests in this court the power to settle those disputes. We have exercised that power in a variety of instances, determining in the several instances the justice of the dispute. Nor is our jurisdiction ousted, even if, because Kansas and Colorado are states sovereign and independent in local matters, the relations between them depend in any respect upon principles of international law. International law is no alien in this tribunal.

One cardinal rule, underlying all the relations of the states to each other, is that of equality of right. Each state stands on the same level with all the rest. It can impose its own legislation on no one of the others, and is bound to yield its own views to none. Yet, whenever, as in the case of *Missouri v. Illinois*, 180 U. S. 208, the action of one state reaches through the agency of natural laws, into the territory of another state, the question of the extent

and the limitations of the rights of the two states becomes a matter of justiciable dispute between them, and this court is called upon to settle that dispute in such a way as will recognize the equal rights of both and at the same time establish justice between them. In other words, through these successive disputes and decisions this court is practically building up what may not improperly be called interstate common law.

This principle of equality has no application to a case which presents a conflict between a paramount sovereign power of Congress and an assertion of power by a state.

There is no room in our scheme of government for the assertion of state power in hostility to the authorized exercise of Federal power. (*Minnesota Rate Cases*, 230 U. S. 352, 399)

The case of *Mississippi R. R. Co. v. Ward*, 2 Black 485 (cited and quoted in Appellant's Brief, p. 199) was simply a suit between private individuals.

In the instant case, however, the obstruction was *clearly* proved unless the conjectures and superficial criticisms of one person, whose interest and qualifications are open to question, can be deemed to cast any serious doubt on the conclusions of the United States Lake Survey, the International Waterways Commission, the Chief of Engineers of the United States, the Secretary of War, and a host of expert engineers of high standing.

C

Appellant's criticism of appellee's use of expert evidence in this case is unfounded

In its Point VI (a) appellant takes occasion to criticize appellee's use of expert testimony to prove the lowering of the levels of the Great Lakes and the injury to navigation and commerce, and complains that "no one testified to observing any lowering effect" or "to observing a loss in the amount the boats actually carried." (Appellant's Brief, p. 194). Does one need to see very much more than the physical phenomenon of a large navigable river carrying 10,000 c. s. f. into the Mississippi Valley? Appellant will not assert that the evidence of the total discharge of the Niagara River was a mere matter of expert testimony, and that it is taking practically five per cent of that discharge. It will not deny that it is abstracting from Lake Michigan substantially as much as is contributed by the combined flow of the Grand, St. Joseph, and Fox Rivers.

Such a contention was made and answered in the first *Wheeling Bridge Case*, 13 How. 518, 568:

The fact that the bridge constitutes a nuisance is ascertained by measurement. The height of the bridge, of the water, and of the chimneys of steamboats are the principal facts to be ascertained. If the obstruction exists, it is a nuisance. To ascertain this a jury is not necessary. It is shown in the report, by a mathematical demonstration. And the other matters connected with the case as to the benefit of high chimneys, lowering of them in pass-

ing under the bridge, and shortening chimneys, are matters of science and experience, better ascertained by a report than by a verdict. And the same may be said of the statistics which are in the case.

Appellant cites *Missouri v. Illinois*, 200 U. S. 496, and *North Dakota v. Minnesota* 263 U. S. 365. We have already pointed out the distinction between controversies among states, which come into this Court on a basis of equality, and the present controversy, in which the Federal Government is asserting its paramount right. *Salvin v. North Brancepeth Coal Co.*, L. R. 9 Ch. App. 705, also cited by appellant, was a controversy between private parties, and can be of no assistance in a case of this kind.

V

The obstructions created by appellant have never been affirmatively authorized by Congress as required by section 10 of the act of March 3, 1899

Under its Point I appellant claims to find Congressional authority for an apparently unlimited diversion of water in the Act of Congress of March 2, 1827, relating to the Illinois and Michigan Canal, and even goes so far as to assert that—

The Secretary of War construed the Congressional Act of March 2, 1827, and the laws of Illinois, as affirmatively authorizing the diversion. (Appellant's Brief, p. 90.)

This is the only express claim of appellant to Congressional authority but elsewhere in its brief we find substantially the same contention made with

regard to the Niagara Falls Act of 1906 and the Canadian Boundary Waters Treaty of January 11, 1910 (Appellant's Brief, pp. 188-192). We shall treat of all three claims of authority under the same heading.

We discuss them only under protest. Section 10 of the Act of Congress of March 3, 1899, demands that the particular obstruction be "*affirmatively* authorized," and the word "*affirmatively*" forbids any *implication* of authority. The statutory requirement can not be met by anything short of *express* authority.

A

The Act of Congress of March 2, 1827, relating to the Illinois and Michigan Canal did not constitute such authorization.

Fully to appreciate appellant's ingenuity in resurrecting this ancient Act of 1827 (4 St. at L. 234) it is necessary only to read its provisions and to know how much, or how little, was done under the authority of that statute. We need not pause to discuss the prior Act of March 30, 1822 (3 St. at L. 659) as, by its terms, it was abandoned by failure of Illinois to comply with its conditions. The pertinent portions of the Act of 1827 are as follows:

An act to grant a quantity of land to the State of Illinois for the purpose of aiding in opening a canal to connect the waters of the Illinois River with those of Lake Michigan. [Approved and in force March 2, 1827.]

SECTION 1. *Be it enacted by the Senate and House of Representatives of the United States of America in Congress Assembled*, That there be

and hereby is granted to the State of Illinois, for the purpose of aiding the said State in opening a canal to unite the waters of the Illinois River with those of Lake Michigan, a quantity of land equal to one-half of five sections in width, on each side of said canal, and reserving each alternate section to the United States, to be selected by the Commissioner of the Land Office, under the direction of the President of the United States, from one end of the said canal to the other; and the said land shall be subject to the disposal of the Legislature of the said State, for the purpose aforesaid, and no other: *Provided*, That the said canal when completed, shall be and forever remain a public highway for the use of the Government of the United States, free from any toll, or other charge, whatever, for any property of the United States, or persons in their service passing through the same: *Provided*, That said canal shall be commenced within five years and completed in twenty years, or the State shall be bound to pay to the United States the amount of any lands previously sold, and that the title to purchasers under the State shall be valid.

SEC. 2. And be it further enacted, That so soon as the route of the said canal shall be located and agreed on by the said State, it shall be the duty of the Governor thereof, or such other person or persons as may have been, or shall hereafter be, authorized to superintend the construction of said canal, to examine and ascertain the particular sections to which said State will be entitled, under the provisions of

this act, and report the same to the Secretary of the Treasury of the United States.

SEC. 3. And be it further enacted, That the said State under the authority of the Legislature thereof, after the selection shall have been so made, shall have power to sell and convey the whole or any part of the said land, and to give a title in fee simple therefor, to whomsoever shall purchase the whole or any part thereof. (Rec. Vol. VIII, Rec. 68-69.)

This land grant amounted to 200,000 acres. (Rec. Vol. IV, p. 2228.)

By an act passed January 9, 1836, the State Legislature of Illinois provided for the construction of the Illinois and Michigan Canal (Rec. Vol. IV, pp. 2295-2304):

SEC. 16. (Description—Proviso). The said canal shall not be less than forty-five feet wide at the surface, thirty feet at the base, and of sufficient depth to insure a navigation of at least four feet, to be suitable for ordinary canal-boat navigation, to be supplied with water from Lake Michigan and such other sources as the canal commissioners may think proper, and to be constructed in the manner best calculated to promote the permanent interest of the country; reserving ninety feet on each side of said canal to enlarge its capacity, whenever in the opinion of the board of canal commissioners the public good shall require it.

The canal as originally projected and worked on from 1836 to 1841 had a declivity of an inch per mile, or 2.9 feet between Bridgeport (on the fork of the

south branch of the Chicago River) and Lockport. Lack of funds prevented its completion on this plan. When work was resumed in 1843 a temporary expedient was adopted, of a temporary level eight feet above the Chicago datum. (Rec. Vol. III, 1718.) The canal was opened in 1848. It was fed in ordinary seasons from the Desplaines River and by a feeder through the Sag Valley and the Calumet River at Blue Island. A dam was built across the Calumet River at an elevation eleven feet above the Chicago datum. This was not sufficient in the dry seasons, and a Dutch Wheel or Lift Wheel was erected at Bridgeport for the purpose of supplementing the feed water of the canal. (Rec. Vol. III, p. 1716.) In time of drought—about 45 days in the year—the canal received water by pumping from the Chicago River. (Rec. Vol. VI, p. 3723.)

In 1865, an enabling act was procured from the Illinois Legislature which authorized the City of Chicago, by arrangement with the Canal Trustees, to deepen this canal on the original plan for sanitary purposes. (Rec. Vol. VIII, pp. 70-71.) This plan was completed in 1871. When opened to gravity the canal is estimated by appellant's witness Cooley to have carried out 40,000 cubic feet per minute. The lake was then high and in later years, when it fell, the capacity shrunk to 15 to 20,000 cubic feet per minute, which was scarcely more than the dry weather flow. In 1881 the Illinois Legislature by resolution authorized Chicago to install pumps at the north terminus of the canal (i. e., Bridgeport) whereby at least

60,000 cubic feet per minute should be pumped from the Chicago River into the canal. These pumps were installed in 1883, but were not taken over by the city until 1886. (Rec. Vol. III, 1718-1719.)

According to appellant's own witness, Cooley, after 1888 the Illinois and Michigan Canal was operated—

up to a limit of 60,000 feet of water per minute or a thousand feet per second, which was little in excess of the ordinary flow of the sewers coming from the water supply and the ground waters. (Rec. Vol. III, p. 1736.)

In testimony given several years later, after the hearing before the Secretary of War, appellant's Chief Engineer Wisner, stated that the capacity of the canal after 1871 was 24,000 cubic feet per minute, and that after the installation of the pumping works at Bridgeport, a total of 50,000 to 60,000 cubic feet per minute was caused to flow into the canal from the Chicago River. The witness then made what was on its face a *guess*, unsupported by observation, measurements, or facts, that the diversion of this amount—

had the practical effect of reversing the Chicago River * * * when there was a dry weather flow (i. e., a minimum run-off). (Rec. Vol. VI, p. 3433.)

If the dry-weather flow of the Chicago River is as little as 60,000 cubic feet per minute, it is hard to understand why appellant's witnesses elsewhere were so bold as to state its maximum run-off as 10,000

c. s. f. If any water was ever diverted from *Lake Michigan* before the opening of the appellant's canal in 1900, it was an insignificant amount in a limited portion of the year, and that there ever was a reversal of current prior to 1900 may well be doubted.

Now, having briefly reviewed the history of this canal, we may appropriately repeat the comment made by representatives of the Canadian Government in a brief filed with the Secretary of War in reply to appellant's contention:

To argue that the operation of a small pumping plant for 45 days in the year raising an insignificant amount of water for navigation purposes for locks 110 feet long, 18 feet wide and 6 feet deep, justifies the diversion of 10,000 cubic feet of water per second, is a somewhat unusual expansion of terminology. (Rec. Vol. VI, p. 3724.)

The decision of the Secretary of War on January 8, 1913, contained the following:

In the argument before me it was urged that the present canal represented the growth and development of a national policy expressed in two acts of Congress, 1822 and 1827, which authorized the construction of a canal "to connect the Illinois River with Lake Michigan," thus connecting the two watersheds. (Acts of March 30, 1822, and March 2, 1827.) But these statutes authorized a canal for the purpose of navigation and not sanitation. (*Missouri v. Illinois*, 200 U. S. 526.) The Illinois and Michigan Canal, actually con-

structed under their authority, derived its water for navigation purposes from the Calumet, Des Plaines, and Chicago Rivers, and not from the Lakes. And although in the latter part of its existence it was used to a very slight extent to help purify the waters of the Chicago River and thus sanitize the City of Chicago, such a purpose could not have been dreamed of at the time its construction was authorized by Congress, 90 years ago. I can not see that its authorization and construction offer the slightest congressional sanction for the great canal now under discussion, which was not even contemplated until much more than half a century later. (Appellant's Narrative, pp. 29-30.)

The reasoning of the Secretary of War would seem unanswerable. Since counsel, however, press the point so urgently, we shall pursue it further.

1. *The authority in both the act of March 30, 1822, and the act of March 2, 1827, was for the construction of a particular canal, the location of which was to be determined by law.*

The act of the Illinois Legislature of January 9, 1836, reserved ninety feet on each side of the proposed canal "to enlarge its capacity" and the canal was constructed under the authority of that act. It is not claimed that the appellant's canal is within this ninety foot zone; it could not be, for the new canal is 160 to 200 feet wide. The land granted to Illinois by the Federal government was sold to individuals.

The Act of Congress authorizes a canal, not two canals or a dozen. Would appellant claim that Congressional authority to build one bridge over the Ohio River includes authority to build another a mile away?

The Illinois and Michigan Canal exists to-day. In fact, it was the subject of legislation by the General Assembly of Illinois as late as July 1, 1919, Section 3 of which is exceedingly interesting in view of appellant's assertion that its canal *replaces* the old one:

SEC. 3. The Department of Public Works and Buildings is authorized and directed to protect against and prevent encroachments upon said Illinois and Michigan Canal *throughout its entire course as originally constructed, and to preserve its navigable condition throughout said entire course*, and it may, when the permission of the Federal government is obtained, change and improve said canal to provide terminal and harbor facilities for interchange of freight or for any other use in connection with transportation which said department may deem advantageous to the State. No permission heretofore or hereafter granted, which results in obstruction to the navigable condition or capacity of any portion of said canal or interferes with its use for any of the purposes herein named shall operate in any way whatever to deprive the State of any of its rights in said canal or canal lands, and all obstructions or structures heretofore or hereafter erected or placed in said canal shall be subject

to removal upon the order of said Department of Public Works and Buildings: *Provided, however,* The use of the Sag Channel of the Sanitary District of Chicago shall not be prevented nor shall it be considered an obstruction within the meaning of this section, but the State may require, in the development of its waterways and the use of said Illinois & Michigan canal such changes in the crossing of the Illinois and Michigan canal by said Sag channel as may be necessary for the use of said Illinois and Michigan canal by the State.

Note, too, that the Illinois Legislature does not regard itself as immune from Federal control with respect to the old canal. It regards it as necessary to obtain the permission of the Federal government to change or improve the canal. And yet appellant is in substance saying that the Illinois Legislature bestowed upon appellant in 1889 all its rights in connection with the old canal and that these rights included authority to build a new one many times its size. When counsel state (Appellant's Brief, p. 123) that—

Illinois fixed the amount of the diversion by appellant's organic act, which action was also pursuant to the Act of Congress of March 2, 1827;

they are ascribing an intention to the Illinois Legislature which it did not have and which was specifically negatived no longer ago than 1919. *Appellant has nothing whatsoever to do with the canal constructed under the Act of Congress of 1827, and has no rights*

with respect to it further than permission to cross it with the Sag channel. Even this permission is subject to such modification "as may be necessary for the use of said Illinois and Michigan Canal by the State."

2. *The authority in the act of March 2, 1827, was for a canal for the purpose of navigation and not sanitation*

Neither Congress nor the State of Illinois contemplated the use of the proposed canal for any purpose but navigation. It is extremely doubtful whether Congress has any power to authorize a diversion of navigable waters for the mere purpose of sanitation; at any rate, it did not intend to do so. From 1871 to 1900 it was as a matter of fact used by the city of Chicago to some extent for sewage disposal. The authority of Congress to do this was not asked nor given. The amount of water taken was insignificant and it is doubtful whether at its maximum Chicago withdrew a perceptible quantity from Lake Michigan. In *Missouri v. Illinois*, 200 U. S. 498, this Court, referring to the early Acts of Congress, said (p. 526):

Of course these acts do not grant the right to discharge sewage.

There is evidence in this case that 1,000 c. s. f. is sufficient for navigation purposes. (Rec. Vol. VI, pp. 3633-4.) The fact that a canal is big enough to accommodate 10,000 or 14,000 c. s. f. does not mean that appellant has to take that much. In fact a slower current would be better for purposes of navi-

gation. The fact that the maximum run-off of the Chicago River is 10,000 c. s. f. is immaterial. So far as navigation is concerned, it makes little difference whether the current flows one direction or the other. Furthermore, the maximum run-off of the Calumet River is over 15,000 c. s. f. Does that mean that eventually appellant will be forced to take over 25,000 c. s. f. under the Act of 1827?

When counsel for appellant state (Appellant's Brief, p. 122) that—

To provide a "never-failing supply of water for navigation of the Illinois River at all times," it was likewise necessary to have a volume of water from Lake Michigan for navigation purposes of that amount (e. g. 10,000 c. s. f.)—they are making a statement without foundation in the record or in fact.

In this connection the following may be quoted from *Ex parte Boyer*, 109 U. S. 629, 631:

The Illinois and Michigan Canal is an artificial navigable waterway, connecting Lake Michigan and the Chicago river with the Illinois river and the Mississippi river. By the Act of Congress of March 30th, 1822 (ch. 14, 3 Stat. at L. 659), the use of certain public lands of the United States was vested in the State of Illinois forever, for a canal to connect the Illinois river with the southern bend of Lake Michigan. The Act declared "That the said canal, when completed, shall be and forever remain a public highway, for the use of the Government of the United States, free from any toll or other charge whatever, for

any property of the United States, or persons in their service, passing through the same." This declaration was repeated in the Act of March 2, 1827 (ch. 51, 4 Stat. at L. p. 234), granting more land to the State of Illinois to aid it in opening the canal. We take judicial notice of the historical fact that the canal, 96 miles long, was completed in 1848, and is 60 feet wide and 6 feet deep, and is capable of being navigated by vessels which a canal of such size will accommodate and which can thus pass from the Mississippi river to Lake Michigan and carry on interstate commerce, although the canal is wholly within the territorial bounds of the State of Illinois. By the Act of 1822, if the land granted thereby shall cease to be used for a canal suitable for navigation, the grant is to be void.

If, as this case seems to imply, the Illinois and Michigan Canal became a navigable water of the United States, then there could have been no modification of its course, condition, *location*, or capacity after September 19, 1890, without the approval of the Secretary of War. Nor could it have been excavated or filled in without such approval. The Act of Congress of that date, in Section 7, forbade it. A declaration of its navigability was made by the Illinois Legislature.

Appellant's assertion that in constructing the new canal it was merely *replacing* the original canal becomes merely the admission that it was from the outset engaged in an unlawful act.

3. Sections 7 and 10 of the Act of Congress of September 19, 1890, and section 10 of its Act of March 3, 1899, made unlawful any greater diversion than was already being effected in 1890

The largest amount of water ever forced into the Illinois and Michigan Canal at the Bridgeport Pumping Station was 60,000 cubic feet per minute, and even that amount was not maintained at all times. Let us assume, however, that that much was being withdrawn when the Act of 1890 became effective. Thenceforth any increase in the diversion was at least a modification of the condition, etc., of a navigable water of the United States, namely, the Chicago River, and, if on occasions of dry weather flow the current was reversed from Lake Michigan, there was not only a modification of the course of the Chicago River but also a modification of the condition of Lake Michigan. If the diversion became great enough appreciably to affect the level of Lake Michigan or to cause a dangerous current in the Chicago River, then there was an *obstruction*. By its legislation Congress said in effect, that the navigable waters of the United States should be left in *statu quo*.

Whatever authority the State may have had under the Act of 1827, the Act of 1890 put an end to any further or increased exercise of it.

Somewhat the same contention was made in *United States v. Rio Grande Dam & Irrigation Co.*, 174 U. S. 690. The Irrigation Company sought

to justify its obstruction of the Rio Grande River by certain acts of Congress (14 St. at L. 253, Chap. 262 and 26 St. at L. 1101), of which this Court said (p. 706):

Obviously by these acts, so far as they extended, Congress recognized and assented, to the appropriation of water in contravention of the common-law rule as to continuous flow. To infer therefrom that Congress intended to release its control over the navigable streams of the country and to grant in aid of mining industries and the reclamation of arid lands the right to appropriate the waters on the sources of navigable streams to such an extent as to destroy their navigability, is to carry those statutes beyond what their fair import permits.

* * * * *

To hold that Congress, by these acts, meant to confer upon any state the right to appropriate all the waters of the tributary streams which unite into a navigable watercourse, and so destroy the navigability of that watercourse in derogation of the interests of all the people of the United States, is a construction which can not be tolerated. It ignores the spirit of the legislation and carries the statute to the verge of the letter and far beyond what under the circumstances of the case must be held to have been the intent of Congress.

Similarly in the instant case, however, appellant may attempt to disguise its claim, it is really claiming the "right to appropriate all the waters of the tributary streams which unite into a navigable watercourse and so destroy the navigability of that

watercourse." If the Act of Congress of 1827 is still in force and authorizes a diversion of 10,000 c. s. f. in defiance of the Secretary of War, then there is no limit to the diversion appellant may lawfully make. That, in fact, this has in the past been appellant's position is indicated by the report in 1911 of appellant's president in which he says:

I am of the opinion that the presumption that our water supply is to be limited to 10,000 cubic feet per second, or 600,000 cubic feet per minute, is gratuitous and mischievous and should not be voiced by the officials of this district. I believe that we should have the volume requisite to our needs as they appear and are justified. (Appellant's Narrative, p. 34.)

Grants by Congress of authority to create obstructions to navigable waters must be strictly construed. *Newport and Cincinnati Bridge Co. v. United States*, 105 U. S. 470.

4. *The diversion through the Illinois and Michigan Canal affected only an intrastate water, i. e., the Chicago River; it did not affect interstate waters, such as the Great Lakes.*

Except for the guess of appellant's witness Wisner, its Chief Engineer, there is no evidence that even the maximum amount of water diverted through the Illinois and Michigan Canal effected a reversal of current in the Chicago River and caused water to flow in from Lake Michigan. Even the reversal testified to by Wisner took place only in the dry-weather

flow. At no time was an *appreciable* amount of water abstracted from the lake, and at that it had to be pumped out—gravity was not sufficient.

The only navigable water affected was therefore the Chicago River, and that, being an intrastate water, was subject to the State's authority prior to September 19, 1890. The limited diversion of 1,000 c. s. f. might therefore be deemed to have been "affirmatively authorized by law" within the requirement of Section 10 of the Act of that date. This could furnish no justification for interference with an *interstate* navigable water such as Lake Michigan by diverting an amount sufficient appreciably to affect it.

Other considerations may suggest themselves further in answer to appellant's claim that its acts are authorized by the Act of Congress of 1827. We believe that the foregoing sufficiently dispose of appellant's strange claim; and that it is unnecessary to point out the constantly reiterated inaccuracies contained in its brief as to the intentions and purposes of the Secretary of War, the State and the appellant. None of them dreamed of invoking the authority of the Act of 1827 until the exigencies of this litigation made it necessary for appellant to hunt desperately for authority.

We recur, however, to a rather pertinent inquiry: by what right, title or interest is *appellant* asserting any authority under the Act of 1827? None has been delegated to it by the Illinois Legislature, and the State of Illinois is not a party to this litigation.

B
 The Niagara Falls Act of 1906 did not constitute such authorization; if anything, it forbade the unauthorized diversion

We are not certain as to whether or not appellant means to place any reliance on this statute. (See Appellant's Brief, pp. 51-54, pp. 179-180.) We submit, however, that not only do its provisions not support appellant's interpretation of it but they may fairly be interpreted to forbid appellant's unauthorized diversion of water.

This statute was effective from 1906 to 1908, inclusive (when the Calumet project was born, its permit applied for and refused, and the Calumet River Suit begun). It required that the amount of any diversion of lake water for domestic, sanitary, or navigation purposes be fixed from time to time either by Congress or the Secretary.

Section 1, so far as material, reads (34 Stat. 626, ch. 3621):

SEC. 1. That the diversion of water from Niagara River or its tributaries, in the State of New York, is hereby prohibited, except with the *consent* of the Secretary of War as hereinafter authorized in section two of this act: *Provided*, That this prohibition shall not be interpreted as forbidding the *diversion* of the *waters of the Great Lakes* or of Niagara River for *sanitary* or *domestic purposes*, or for *navigation*, the amount of which may be fixed from time to time by the Congress of the United States or by the Secretary of War of the United States under its direction.

Section 2 authorizes the Secretary to "grant permits" and "revoke permits" for diversion, and

requires him to make "regulations preventing and limiting the diversion."

Section 3 punishes diversion contrary to the act and provides that—

the removal of * * * any construction *incidental to or used for such diversion* * * * as well as any diversion of water * * * in violation hereof, may be enforced or enjoined at the suit of the United States * * * instituted under the direction of the Attorney General.

We submit that this act reaches diversion from Lake Michigan at Chicago.

(1) Its prime purpose was to prevent further depletion of the flow at Niagara Falls. Lake Michigan, through Lakes Huron and Erie, was a chief source of supply. The title of the act is "For the construction and regulation of the waters of Niagara River, *for the preservation of Niagara Falls*, and for other purposes." The side notes in 34 Stat. 626, opposite section 1 read: "Niagara Falls; Preservation of. Post, p. 824. Proviso: Diversion of waters." And the reference (34 Stat. 824) is to a resolution of the same Congress passed March 15, 1906, requiring the international commission to report as to—

what action is * * * necessary and desirable to *prevent the further depletion of the water flow over Niagara Falls*.

And in the committee report submitting the measure, which, with minor amendments, became the present act, and as a substitute for a bill pre-

viously introduced (3 House Rep., 59th Cong. 1st sess., Rep. No. 4654) its object was explained as follows:

Should Congress decide that in those portions * * * where navigation exists *the water should flow in its present condition, without depletion or diversion*, it would seem that no judicial or other authority could review its action in the premises. It is a matter of some surprise that the companies which have proceeded to divert the waters of the river under the authority of the State of New York have never appealed to Congress or to the Federal Government to confirm the authority granted by that State. It is thought best by the committee that the Federal authority should now be exerted, not merely for the preservation of the scenic grandeur of Niagara Falls, but *for the maintenance of navigation* and the proper control of the river as a boundary stream. * * *

It is, however, very desirable, if not essential, that legislation be now enacted to prevent *the further depletion or diversion of the waters of the river* and to furnish a basis for diplomatic action.

In the bill presented a very large responsibility is imposed upon the Secretary of War. This course has been maturely considered and has seemed desirable, because the question of impairment of the scenic beauty of the cataract and of the *interference with navigability* or the integrity of Niagara River as a boundary stream is largely one of hydraulic engineering. *It can not now be determined*

what quantity of water can be withdrawn without the impairment of the scenic grandeur of Niagara Falls, nor can it be determined to what extent such diversion will interfere with navigability or the integrity of the stream as stated. It is expected that this authority will be exercised by the Secretary of War with strictness.

This being its general purpose, we must apply the principle of construction that as between two possible readings that must be adopted which will tend to effectuate rather than that which will tend to defeat the purpose of the act. *Virginia v. Tennessee*, 148 U. S. 519; *United States v. Freeman*, 3 How. 565; *Jones v. Guaranty Co.*, 101 U. S. 626.)

(2) Against the application of the act to the Chicago diversion it will be urged that the words in the opening clause of section 1, "that the diversion of water from Niagara River, or its tributaries, in the State of New York," limit the scope of the whole act to diversions made somewhere in that State. Thus read, it would leave the act inoperative as to the chief sources of supply and insufficient to accomplish its purpose. It is not at all necessary so to read it. The words "in the State of New York" may be either treated as *descriptio* as to the river (to distinguish it from any other possible river of like name elsewhere) or they may be made to modify the river alone (whether as description or locally) by merely bracketing the words "or its tributaries" or by transposing them to read "from Niagara River, in the State of

New York or (from) its tributaries." Such reading accomplishes the full purpose of the act.

Indeed, this not only may be, but must be done upon the principle "*noscitur a sociis*"—concerning which in *Virginia v. Tennessee, supra*, the court (p. 519) says:

Noscitur a sociis is a rule of construction applicable to all written instruments. Where any particular word is obscure or of doubtful meaning, taken by itself, its obscurity or doubt may be removed by reference to associated words.

The proviso of the very same section (1) reading—

That this prohibition shall not be interpreted as *forbidding the diversion of the waters of the Great Lakes*, or of Niagara River for sanitary or domestic purposes, or for navigation, etc., in its negative pregnant is an implied declaration that it must be interpreted as *forbidding diversion from the Great Lakes for any other purpose*.

In *Cummings v. Chicago*, 188 U. S. 410, this court, quoting from *Lake Shore, etc., R. Co. v. Ohio*, 165 U. S. 365, said (pp. 429-30):

The construction claimed for the statute is that its purpose was to deprive the States of all power as to every stream, even those wholly within their borders; whilst the very words of the statute, saying that its terms *should not be construed as conferring* on the States power to give authority to build bridges on streams not wholly within their limits, *by a negative pregnant* with an affirma-

...tive, demonstrate that the object of the act was not to deprive the several States of the authority to consent to the erection of bridges over navigable waters wholly within their territory.

Turning to the succeeding sections of the act:

The first clause in section 2 authorizes the Secretary to "grant permits for the diversion of water in the United States from said Niagara River, or its tributaries." It may be said that because Niagara River lies between New York State and Canada that the words "in the United States" take the place of the words "in the State of New York" in the earlier section. (We think that their real purpose was to keep the legislation within the jurisdiction of Congress. But if we read it as "from said Niagara River in the United States" equally must we read it as "from its tributaries in the United States.") This may not be said, however, of the opening clause of section 3, reading "diverting water from said Niagara River, or its tributaries," since it has no reference either to the State or to the United States, while the language in section 4 providing for negotiations between the United States and Great Britain "for such regulation and control of the waters of the Niagara River and its tributaries as will preserve the scenic grandeur of Niagara Falls and of the rapids of said river" would seem to make clear that the tributaries referred to are those wherever located which contribute to the flow of water over the Falls. The act, then, does reach diversion of water from Lake Michigan at Chicago.

It remains but to consider what the act commands; and in this case the material mandate is found in the proviso of section 1, *supra*. Applying to its reading the rule laid down in the *Cummings case*, *supra*, we find that it forbids diversion from the Great Lakes save for three purposes, viz, sanitary, domestic, and navigation, and as to these provides—

The amount of which [diversion] may be fixed from time to time by the Congress of the United States, or by the Secretary of War of the United States under its direction.

Only by compliance with this proviso can a lawful diversion be made from the waters of the Great Lakes. There is no room for misconstruction as to what it demands. The amount of the diversion must be fixed either (1) by Congress or (2) by the Secretary under its direction. Any diversion, or threatened diversion, without such prior fixing of amount, or in excess of an amount so previously fixed, is unlawful and may be enjoined.

The words "under its direction," as applied to the Secretary, mean the direction given to him either in the succeeding section 2 of this act, or like direction given by any other act (such as 1890 or 1899).

In this statute Congress has left no room for the contention that it has deliberately or otherwise relegated to the courts its own function to determine whether an obstruction will or will not be created.

Neither this act nor its proviso contains any reference to obstruction to navigable capacity. And so (under *United States v. Chandler-Dunbar Co.*, 229

U. S. 53, 64, supra) the judgment and determination either of the Congress or of the Secretary of War, as its agent, is conclusive as to whether a particular proposed diversion "is or is not an obstruction and a hindrance to navigation;" and the court must enjoin either upon a showing that no application has been made to the Congress or to the Secretary or that if made it has been denied by either. In no other way can the exclusive control of Congress over the subject be preserved.

This act of 1906 operates upon all diversions or work in aid thereof not accomplished prior to its passage.

In reply to appellant's hypercritical construction of the act as meaning that the Secretary of War might *thereafter* limit the diversion and that he did not already have the power, we suggest that counsel read again the case of *United States v. Rio Grande Dam & Irrigation Co.*, 174 U. S. 698. In that case there was a *diversion* of water at a point on the Rio Grande River far above its navigable portion; this was held to be not merely a *modification* but an *obstruction*.

C

The Canadian Boundary Waters Treaty of January 11, 1909, did not constitute such authorization; instead, it forbade any diversion over 4,167 c. s. f.

It is difficult to treat patiently with assertions such as are made by counsel for appellant with regard to the intent and effect of the Treaty. The International Waterways did not recommend that there should be allowed a diversion of "at least 10,000 cubic second

feet of water." (Appellant's Brief, p. 188.) In the report of May 3, 1906, it recommended that the diversion be "not to *exceed* 10,000 cubic feet per second." (Appellant's Narrative, p. 105.) In its report of January 4, 1907, it recommended that "the government * * * *prohibit* the diversion of more than 10,000 cubic feet per second." (Appellant's Narrative, p. 105.)

The International Waterways Commission did *not* find "the Chicago diversion to the amount of 10,000 second feet * * * to be an existing diversion." (Appellant's Brief, p. 190.) This is apparent from the following portions of thier report of January 4, 1907:

The Chicago Drainage Canal was then constructed, water being turned into it for the first time in January, 1900. It was not then, and has not since been, completed to its full capacity as designed. In some places where the excavation was in rock the full dimensions of the prism were taken out, but in earth a considerable volume was left to be removed by the easy method of dredging hereafter. When fully completed it was designed to have a capacity of 600,000 cubic feet per minute, or 10,000 cubic feet per second, flowing at a velocity of 1.25 miles per hour in earth and 1.9 miles per hour in rock. (Appellant's Narrative, p. 509.)

10. The channel of the Chicago River is not large enough to transmit that volume from the lake to the canal except at velocities which are an obstruction to navigation. The amount

which the Secretary of War has thus far permitted the sanitary district to pass through the river is 4,167 cubic feet per second. In order to obtain authority for a larger amount the trustees have undertaken to enlarge the channel of the river and have accomplished a large amount of work in that direction. (Appellant's Narrative, p. 510.)

The board assumed that the Chicago Drainage Canal would *eventually* be permitted to take 10,000 cubic feet per second from Lake Michigan. (Appellant's Narrative, p. 512.)

18. The diversion of large bodies of water from Lake Michigan for supplying the drainage canal has not been authorized by Congress. The plans of the sanitary district, except those for the enlargement of the Chicago River, have not been submitted to any Federal authority for approval. It was only after the opening of the canal that application was made to the Secretary of War for permission to divert the quantity of water required by The State law. The secretary granted permission for such quantity as would pass through Chicago River without detriment to navigation, a quantity considerably less than that required by the State law. After experimenting with various amounts it was fixed at 250,000 cubic feet per minute, or 4,167 cubic feet per second, and that is the amount now authorized. It is "subject to such modification as, in the opinion of the Secretary of War, the public interests may from time to time require." Copies of all the permits granted by the Secretary of War in this connection will be found in Appendix I. (Appellant's Narrative, p. 513.)

There appears to be a tacit general agreement that Chicago needs or *will need* about 10,000 cubic feet of water per second for sanitary purposes and that the city should have it without further question. (Appellant's Narrative, p. 514.)

That 10,000 c. s. f. was not an "existing diversion" is apparent from the testimony as to the actual diversion by appellant from 1900 to 1913. (See Statement of the Case, p. 69.) In 1907 appellant was withdrawing 6,444 c. s. f.; in 1910, 7,132 c. s. f. As a matter of fact, as late as 1909 the appellant *refused* to inform the International Waterways Commission what it was withdrawing. In the report of the Commission of January 8, 1910, it is stated:

In 1900 the Chicago Drainage Canal began diverting water from Lake Michigan. The amount diverted between January, 1900, and June, 1904, inclusive, was computed from data furnished by the U. S. Engineer Office at Chicago. *The flow through the canal since June, 1904, has been assumed to be 4,167 cubic feet per second, the quantity authorized in the permit of the Secretary of War.* It is believed to have been greater, but the difference is not sufficient to vitiate the results sought for here. An application by the Commission to the Sanitary District of Chicago for a copy of their record met with a refusal to furnish it. (Rec. Vol. VII, p. 253.)

Let us now examine the provisions of the Treaty. Article 2, quoted in Appellant's Brief (p. 189),

preserved the right of citizens of one country to sue in the courts of the other country for damages as to any injury caused by a diversion with the proviso—

but this provision shall not apply to cases already existing or to cases expressly covered by special agreement between the parties hereto.

Let us assume that this provision prevented any individuals in Canada from suing for an injury caused by an *existing* diversion. The appellant's diversion of 10,000 c. s. f. was *not* an existing diversion. It actually was diverting 6,970 c. s. f. which it was concealing from the knowledge of the International Waterways Commission. Its *authorized* diversion was 4,167 c. s. f. which that Commission assumed to be the *then* flow through the canal. In interpreting the word "existing" as it appeared in the Treaty, were not the negotiators of it justified in assuming that the appellant was obeying the law? The question of an increased diversion had not therefore been raised directly except by the appellant's application for a permit to divert 4,000 c. s. f. through the Calumet River. This had been denied. Of course, it was known that some day the appellant might ask for 10,000 c. s. f. but it was more than doubtful that the Secretary of War, having refused the Calumet application because of its effect on the lake levels, would ever grant permission to divert this amount.

Furthermore, the right of individuals to sue is a very different matter from the right of their respec-

tive governments in international law. This is apparent from the second paragraph of Article 2 of the Treaty, which is as follows:

It is understood, however, that neither of the High Contracting Parties intends by the foregoing provision to surrender any right which it may have to object to any interference with or diversions of waters on the other side of the boundary the effect of which would be productive of material injury to the navigation interests on its own side of the boundary. (Appellant's Narrative, p. 532.)

Appellant takes the strange position that this paragraph applies only to *further* diversions, when it plainly states that it applies to *any* diversion and that neither party to the Treaty surrenders the right by anything stated in the first paragraph.

Article 3 of the Treaty reads:

It is agreed that, in addition to the uses, obstructions, and diversions heretofore permitted or hereafter provided for by special agreement between the Parties hereto, no further or other uses or obstructions or diversions, whether temporary or permanent, of boundary waters on either side of the line, affecting the natural level or flow of boundary waters on the other side of the line, shall be made except by authority of the United States or the Dominion of Canada within their respective jurisdiction and with the approval, as hereinafter provided, of a Joint Commission, to be known as the International Joint Commission.

The foregoing provisions are not intended to limit or interfere with the existing rights of the Government of the United States on the one side and the Government of the Dominion of Canada on the other, to undertake and carry on governmental works in boundary waters for the deepening of channels, the construction of breakwaters, the improvement of harbors, and other governmental works for the benefit of commerce and navigation, provided that such works are wholly on its own side of the line and do not materially affect the level of flow of the boundary waters on the other, nor are such provisions intended to interfere with the ordinary use of such waters for domestic and sanitary purposes. (Appellant's Narrative, p. 532.)

Appellant after stating that—

the treaty expressly eliminates from its terms by the preliminary article, Lake Michigan.

* * * Obviously, Lake Michigan is not a boundary water, as defined by the Treaty (Appellant's Brief, pp. 188-9)—

later employs the truncated quotation from article 3—

nor are such provisions intended to interfere with the ordinary use of such waters for domestic and sanitary purposes (Appellant's Brief, p. 189).

Manifestly, if the last sentence applies to Lake Michigan, so also does the first paragraph of article 3, which prohibits any further diversions except with

the approval of the International Joint Commission, a tribunal created by Article 7 of the Treaty.

The Chicago diversion is not "the ordinary use of such waters for domestic and sanitary purposes." The ordinary use consists in such use as causes the water to return eventually to the same channel so that there is no appreciable effect on the level of the water. Chicago is the only city in the world diverting a large-sized river into another watershed. What is so unusual that only one city in the world has done it can hardly be deemed an *ordinary* use. Under appellant's construction of the word, Cleveland may divert Lake Erie into the Ohio River, and each other city on the Great Lakes may do likewise, with the result that these waters become unnavigable because of "ordinary" uses.

Appellant's organic law requires a diversion of 20,000 cu. ft. per minute for each 100,000 of population. If 10,000 c. s. f. is an "ordinary" use, then 25,000 c. s. f. will be an "ordinary" use in 1950.

Counsel for appellant again distorts the provisions of the Treaty by stating:

Article VIII expressly provides that the uses for domestic and sanitary purposes shall be paramount. (Appellant's Brief, p. 189.)

As a matter of fact, Article 8 provides that—

The International Joint Commission shall have jurisdiction over and shall pass upon *all* cases involving the use or obstruction or diversion of the waters with respect to which

under Articles 3 and 4 of this Treaty the approval of this Commission is required. (Appellant's Narrative, p. 535.)

According to appellant, Articles 3 and 4 apply only to *boundary* waters, not Lake Michigan. Article 8 further provides that the Commission shall be governed in *such* cases "by the following rules and principles," included in which is an order of precedence as to uses "for *these* waters." First in the order of precedence is "uses for domestic and sanitary purposes." (Appellant's Narrative, p. 535.)

Where does the Treaty *authorize* or "protect" the Chicago diversion. Article 2 expressly reserves to the United States exclusive control over diversions from Lake Michigan, so long as there is no material injury to Canadian navigation interests. The United States, by entering into the Treaty, did not contract to maintain either the existing diversion of 4,167 c. s. f. or a future diversion of 10,000 c. s. f.

It is useless to cite cases for the elemental proposition that a treaty, under the Federal Constitution, is a law of the land as an act of Congress is. This is only true when the provisions of the treaty prescribe a rule by which the rights of a person may be determined and when such rights are of a nature to be enforced in a court of justice. In *Foster v. Neilson*, 2 Pet. 253, this court said (p. 314):

A treaty is in its nature a contract between two nations, not a legislative act. It does not

generally effect, of itself, the object to be accomplished; especially so far as its operation is intraterritorial; but is carried into execution by the sovereign power of the respective parties to the instrument. In the United States a different principle is established. Our Constitution declares a treaty to be the law of the land. It is consequently to be regarded in courts of justice as equivalent to an act of the legislature, whenever it operates of itself without the aid of any legislative provision. *But when the terms of the stipulation import a contract—when either of the parties engages to perform a particular act, the treaty addresses itself to the political, not the judicial, department; and the legislature must execute the contract before it can become a rule for the court.*

It is elemental also that there must be a clear case of conflict between a treaty and a statute.

Repeals by implication are never favored, and a later treaty will not be regarded as repealing an earlier statute by implication, unless the two are absolutely incompatible and the statute can not be enforced without antagonizing the treaty. (*Johnson v. Browne*, 205 U. S. 309, 321.)

There is certainly no "clear case of conflict" between a statute forbidding obstructions to navigable capacity of waters in the United States without authorization from the Secretary of War and the above-quoted provisions of the Treaty.

VI

Appellant's diversion in excess of 4167 c. s. f. has not been recommended by the Chief of Engineers nor authorized by the Secretary of War, as required by section 10 of the act of Congress of March 3, 1899.

Assuming, but not conceding, that the acts of the Appellant are not such as to require affirmative authorization by Congress, there can be no question but that they must be recommended by the Chief of Engineers and authorized by the Secretary of War. They are at least modifications of the course, condition and capacity of navigable waters of the United States. Appellant apparently concedes this.

A mere reading of the various applications of appellant and of the permits granted by the Secretary of War would seem amply sufficient to show how absurd is appellant's contention that it has authority from the Secretary of War. It is impossible, however, to point out all the misstatements contained in appellant's brief as to the language, effect, and purpose of these permits. They furnish their own answer to these misstatements.

A

The permits for improvements in the Chicago River prior to May 3, 1899, not only did not include authorization for any diversion of water but expressly withheld it.

The permit of July 3, 1896 (the first granted to appellant) authorized appellant to make certain changes in the capacity of the channel of the Chicago River. The permit of November 16, 1897, authorized appellant to widen the Chicago River between

Quincy and Harrison Streets. Both permits contained the following express conditions:

(2) That the authority shall not be interpreted as approval of the plans of the Sanitary District of Chicago to introduce a current into Chicago River. This latter proposition must be hereafter submitted for consideration.

(3) *That it will not cover obstructions to navigation, by reason of this work while in progress or when completed.* (Rec. Vol. VI, pp. 3574, 3575.)

The second permit recited the provisions of Section 7 of the Act of Congress of 1890 and was expressly granted under that Act (not under the Act of 1827).

The reason for the conditions is apparent not only from the report of the Board of Engineers of August 16, 1895 (see Statement of the Case, p. 30), but also by the report of Major Marshall submitted to the Chief of Engineers of the United States on June 24, 1896 (see Statement of the Case, p. 32), in connection with appellant's application for the first permit. These reports, in no uncertain language, express alarm as to the effect of the diversion even of 300,000 cu. ft. per minute upon the levels of the Great Lakes, and as to whether the United States could do this without the consent of Great Britain. These considerations, as well as the current of the Chicago River, were the reasons for imposing the conditions in the permits. As Major Marshall said:

The question that must come up later for the action of the War Department, to wit. Whether

the improved channel of Chicago River will be sufficient to carry 300,000 cubic feet of water per minute without lessening or destroying the navigability of Chicago River, or whether the City of Chicago will be allowed by the United States and Great Britain to take any water at all from the great lakes, with the inevitable result of lowering their levels is not now under investigation, and is one that will not probably be settled or decided by executive officers. It is or may rather be considered an international question. (Rec., Vol. VI, p. 3573.)

Of course, there was no objection to improving the navigability of the Chicago River as long as no other question was involved. Appellant had full notice then and there that whether it would ever be allowed to divert any water, and if so, how much, was uncertain.

B

The permit of May 8, 1899, did not constitute such authorization

1. On April 22, 1899, the appellant applied for permission to open the channel. Its application (Rec. Vol. VI, p. 3848) and the report of Major Marshall which accompanied it (Rec. Vol. VII, pp. 1-2) show that a diversion of 300,000 cu. ft. per minute with a diversion of $1\frac{1}{4}$ miles an hour was all that was contemplated at the time. Major Marshall was of the opinion, however, that a discharge of 300,000 cu. ft. per minute would lower Lakes Michigan and Huron in an amount which would "not probably much exceed three inches" and that *this much* would not be as serious an injury to navigation as the effect of

the current on the Chicago River. The express recitals in the permit of May 8, 1899 show this. (Rec. Vol. VII, pp. 1-2.) The permit also expressly purports to be issued under Section 10 of the Act of Congress of March 3, 1899 (*not* under the Act of 1827). And it was expressly subject to conditions, one of which was:

2. That if, at any time, it become apparent that the current created by such drainage works in the south and main branches of Chicago river, be *unreasonably obstructive* to navigation or injurious to property, the Secretary of War reserves the right to close said discharge through said channel or to modify it to such extent as may be demanded by navigation and property interests along said Chicago river and its south branch.

2. The above quoted condition was not fulfilled. It was represented to the Secretary of War and not denied by appellart, that the discharge sometimes exceeded 300,000 cu. ft. per minute "causing a velocity of nearly three (3) miles per hour, which greatly endangers navigation." The Secretary of War thereupon, by instrument dated April 9, 1901, after reciting the violation of the condition, directed the appellant to limit its discharge to 200,000 cu. ft. per minute. A minor variation was made by order of July 3, 1901, permitting a flow of 300,000 cu. ft. per minute between 4. p. m. and 12 o'clock midnight. On December 5, 1901, acting on another application of Appellant, the Secretary of War granted

what may be regarded as a new permit to divert 250,000 cu. ft. per minute throughout the day, upon the express conditions:

1. That this permission shall be in lieu of the present authorized rates of flow as stated above.

2. That the permission herein given shall be subject to such modification as in the opinion of the Secretary of War the public interests may from time to time require. (Rec. Vol. VII, pp. 4-5.)

On January 17, 1903, an amended permit was granted by the Secretary of War reciting the conditions in the permit of December 5, 1901, and granting authority to divert 350,000 cu. ft. per minute from its date to March 31, 1903, "after which date it shall be reduced to 250,000 cubic feet per minute as now authorized." This permit contained the following condition:

1. That the permission herein given shall be subject to such modification as in the opinion of the Secretary of War the public interests may from time to time require.

The Wilmette permit of September 11, 1907, and the Calumet permit of June 30, 1910, both contained express conditions that the total diversion of water by appellant from Lake Michigan into the Illinois River should not exceed the 250,000 cu. ft. per minute already authorized by previous permits. (Rec. Vol. VII, pp. 26, 27-29.)

The permit of May 8, 1899, in its unmodified condition, *is not in force* and has not been in force except during the short period from May 8, 1899, to December 5, 1901 (and then only as modified). The permit of December 5, 1901, was accepted by appellant *in lieu* of the previous permits. Whether or not the permit of May 8, 1899, limited the diversion or not is palpably immaterial.

C

The permits of July 11, 1900, relating solely to improvements in the Chicago River, did not constitute such authorization

On July 11, 1900, the Secretary of War gave permission to appellant to make certain changes in the Chicago River at Lake Street, 12th Street, and Ashland Avenue. Appellant had previously applied for permission to make these changes representing that

the modification and alteration of said river as above indicated will greatly benefit navigation in said river (Rec. Vol. VII, p. 39)

and saying nothing whatsoever as to its plans to divert an increased amount of water into the canal or connecting the applications in any way with the canal. In fact, the applications merely recited that appellant was a municipal corporation authorized by the State of Illinois

to enter upon, widen, deepen, and otherwise improve any navigable stream, river, or other waterway.

The permit, however, expressly recited the following:

It being understood that this statement
 * * * *does not in any way invalidate, waive, or affect* the right of the Secretary of War to regulate or revoke the permit granted under date of May 8, 1899, to the Sanitary District of Chicago, to divert the waters of the Chicago river and cause them to flow into the artificial channel.

In other words, appellant was granted no more permission or authority than it already had under the permit of May 8, 1899. How, then, can counsel for appellant, in seeming seriousness, make such statements as the following:

Excavating and filling in the channels of the Chicago River and its branches was the only work appellant was required to do in navigable waters of the United States to accomplish and bring about the diversion. The reversal of the current and flow of the Chicago River and its branches was a *necessary* result. Anyway, this was consented to specifically by the permit of May 8, 1899, for the opening of the canal. The work of improving these channels was done for the purpose only of providing for the abstraction of the water through them in a proper manner. * * *

That includes, of course, the diversion of water to the amount required by State authority (10,000 cubic feet per second). (Appellant's Brief, pp. 131-2.)

D

Appellant, having applied for and accepted the various permits up to and including the Wilmette permit of September 11, 1907, and the Calumet permit of June 30, 1910, and having thus agreed to the conditions on which those permits were issued, is estopped to assert any claim that it is entitled to divert more than 4,167 c. s. f.

It is most astounding that the appellant should seek to invoke principles of estoppel against appellee. (See our Point VIII, *infra*, p. 270.) It is the *appellant* that is clearly estopped. Appellant has applied for, and has accepted, valuable privileges and authority from the Secretary of War on express conditions. It accepted the privileges and now asserts that it is not bound by the conditions to which it assented!

The permission to connect the North Branch of the Chicago River with Lake Michigan by the Wilmette Canal, and to construct a pile crib in Lake Michigan and to deposit filling within the limits of that crib were only upon condition that the total diversion be limited to 4,167 c. s. f. The permission to connect the Calumet River with appellant's canal and to divert water through it were contingent on the same condition, as well as nine other conditions. May appellant now be heard to contend that it has authority from the Secretary of War or any Federal authority to divert 10,000 c. s. f. or more?

E

The Secretary of War may impose conditions on permits granted by him under Section 10 of the Act of March 3, 1899, and may revoke or modify such permits on nonfulfillment of these conditions

Under its Point III (c) appellant contends that the Secretary of War is only authorized to grant or refuse

a permit; that he has no authority to modify. This contention has recently been disposed of in *Southern Pacific Company et al. v. Olympian Dredging Company*, 260 U. S. 205. In speaking of Section 7 of the Act of 1890 this Court said (p. 208):

That the Secretary of War was authorized to impose the condition heretofore quoted does not admit of doubt. The power to approve implies the power to disapprove, and the power to disapprove necessarily includes the lesser power to condition an approval. In the light of this general assumption by Congress of control over the subject and of the large powers delegated to the Secretary, the condition imposed by that officer can not be considered otherwise than as an authoritative determination of what was reasonably necessary to be done to insure free and safe navigation so far as the obstruction in question was concerned.

See also cases cited under Point III, E and F.

VII

Appellant's unauthorized diversion of more than 4167 c. s. f., with its consequent effect on the level of the Great Lakes and on the condition of the Chicago, Calumet, and Des Plaines Rivers, can not be justified as an exercise of the police power reserved to the State.

In its Point IV appellant seeks to avoid the effect of Section 10 of the Act of Congress of 1899 "by simply invoking the convenient apologetics of the police power." (*Kansas City S. R. Co. v. Kaw Valley Drainage Dist.*, 233 U. S. 75.) Curiously, however, appellant concedes at the outset that Congress may "occupy the entire field concerning

the regulation of navigable waters of the United States" (Appellant's Brief, p. 152). Apparently, therefore, appellant's contention is that the cases which hold that by its Acts of 1890 and 1899 Congress *has* asserted its paramount control and "meant that thereafter no state should interfere with the navigability of a stream without the condition of national consent" (*United States v. Rio Grande Dam & Irrigation Co.*, 174 U. S. 698) are *wrong* and should be overruled with respect to the obstruction created by appellant. To express the contention in another way, appellant may create an obstruction, no matter how great, if it does so for the supposed interest of public health. An equal obstruction, caused by anyone else in the exercise of some other object of the police power of the state, such as the improvement of its interior navigation, would be unlawful.

No such distinction is made by Congress. The object of its legislation was the preservation of the navigable capacity of navigable waters of the United States. "The language is general and must be given full scope." (*United States v. Rio Grande Dam & Irrigation Co.*, *supra.*) All obstructions and all modifications are unlawful. Whatever the individual states might have done with respect to obstructing navigable waters wholly within their boundaries, in the exercise of their police powers, that power could not thereafter be exercised without national assent. Congress did not intend to make an exception of one object of police power as against any others.

The unqualified use of the word "obstruction" leaves no room for the exercise of any police power to create an obstruction without national assent. It may be conceded that the word "modification" does not cover the ordinary use of a navigable water such as might have been made by an upper riparian owner in a state where riparian rights are recognized (as distinguished from the rule of prior appropriation which obtains in certain western states). The ordinary use is such as preserves the full flow of the river, without any appreciable modification. We are not interested in the present case in determining the right of an upper riparian owner or city to discharge sewage into the river to the detriment of a lower riparian owner or city. That is a matter concerning individuals or cities. The United States is interested in preserving the full, unmodified navigable capacity of its navigable waters. The ordinary use which a riparian owner or city would make of such waters does not involve any appreciable effect on their navigable capacity; in the ordinary case the land on which the riparian owner or city is located *drains* into the same navigable water, and while it may not be as pure, its availability for navigation is unaffected.

The appellant is not making an *ordinary* use of the navigable waters along which the City of Chicago is located. An *ordinary* use is such as Milwaukee, Detroit, Cleveland, and other cities on the Great Lakes are making. Appellant is diverting the equivalent of *three* navigable rivers of the United States,

into another watershed, and now pleads the police power of the state as sanctioning the injury it is inflicting on navigation affecting the entire nation as well as a foreign nation. The fact that Chicago is the *only* city in the entire world which has adopted this method certainly answers appellant's assertion that this is an exercise of a supposed police power to make ordinary or reasonable use of the water.

When appellant asserts that its Enabling Act of 1889 rests upon the police power of Illinois never delegated to the Federal Government, and that its objects were "*first*, the protection of public health; *second*, the improvement of the state's waterways" (Appellant's Brief, p. 155) it is disregarding such elemental and well-established principles that it seems unnecessary to discuss them in detail. The cases cited and quoted by us under our Points II and III are an effective answer to these assertions. We shall, therefore, limit ourselves to a brief mention of the principles and leading cases which are conclusive of the matter.

A

On a subject of interstate commerce national in character and requiring exclusive control by Congress, there is not, and never has been, any reserved police power in the State to invade that control even for the protection of public health

In *Henderson v. Mayor of New York*, 92 U. S. 259, this Court held invalid a statute of New York which was for the purpose of preventing the immigration of diseased paupers. We quote from the opinion:

But assuming that, in the formation of our government, certain powers necessary to the

administration of their internal affairs are reserved to the States, and that among these powers are those for the preservation of good order, of the health and comfort of the citizens, and their protection against pauperism and against contagious and infectious diseases, and other matters of legislation of like character, they insist that the power here exercised falls within this class, and belongs rightfully to the States.

This power, frequently referred to in the decisions of this court, has been in general terms, somewhat loosely called the police power. It is not necessary for the course of this discussion to attempt to define it more accurately than it has been defined already. It is not necessary, because whatever may be the nature and extent of that power, where not otherwise restricted, *no definition of it and no urgency for its use can authorize a State to exercise it in regard to a subject-matter which has been confided exclusively to the discretion of Congress by the Constitution.*

Nothing is gained in the argument by calling it the police power. Very many statutes, when the authority on which their enactments rest is examined, may be referred to different sources of power, and supported equally well under any of them. A statute may, at the same time, be an exercise of the taxing power and of the power of eminent domain. A statute punishing counterfeiting may be for the protection of the private citizen against fraud, and a measure for the protection of the

currency and for the safety of the government which issues it. It must occur very often that the shading which marks the line between one class of legislation and another is very nice, and not easily distinguishable.

But, however difficult this may be, it is clear from the nature of our complex form of government, that, whenever the statute of a State invades the domain of legislation which belongs exclusively to the Congress of the United States, it is void, no matter under what class of powers it may fall, or how closely allied to powers conceded to belong to the States (pp. 271-272).

See also *Kansas City S. R. Co. v. Kaw Valley Drainage Dist.*, 233 U. S. 75.

B

On all other subjects of interstate commerce, when Congress has asserted its paramount control, there is no police power reserved in the State to invade that control

Appellant in effect asserts that the State of Illinois has not surrendered to the Federal Government control over, or power to interfere with, interstate commerce or the navigable capacity of navigable waters, with respect to the protection of public health and the improvement of the state's waterways.

(1) THE PROTECTION OF PUBLIC HEALTH

In *Morgan, etc., Co. v. Louisiana Board of Health*, 118 U. S. 455, 464, this Court said:

We do not think it necessary to enter into the inquiry whether, notwithstanding this, it is to be classed among those police powers which were retained by the States as ex-

clusively their own, and, therefore, not ceded to Congress. For, while it may be a police power in the sense that all provisions for the health, comfort, and security of the citizens are police regulations, and an exercise of the police power, it has been said more than once in this court that, even where such powers are so exercised as to come within the domain of federal authority as defined by the Constitution, the latter must prevail. *Gibbons v. Ogden*, 9 Wheat. 210; *Henderson v. Mayor*, 92 U. S. 272; *New Orleans Gas Co. v. Louisiana Light Co.* 115 U. S. 661.

But it may be conceded that whenever Congress shall undertake to provide for the commercial cities of the United States a general system of quarantine, or shall confide the execution of the details of such a system to a national board of health, or to local boards, as may be found expedient, all state laws on the subject will be abrogated, at least so far as the two are inconsistent.

See also *Compagnie Francaise v. Louisiana Board of Health*, 186 U. S. 380, and *Louisiana v. Texas*, 176 U. S. 1, 19, in which this Court said:

vindication of the freedom of interstate commerce is not committed to the state of Louisiana.

(2) FOR THE IMPROVEMENT OF THE STATE'S
WATERWAYS

We assume that in speaking of the "State's Waterways" counsel for appellant have reference to rivers such as the Chicago, Calumet, and Desplaines Rivers which, while wholly within the boundaries of

the state, are yet navigable waters of the United States. We concede that waters having no interstate communication, such as an interior lake in Illinois having no navigable outlet, is subject to the state's power. That counsel, in the face of the Acts of Congress of 1890 and 1899, should contend that the State still has the right to improve navigable waters of the United States within its limits, without national assent, seems incredible in the light of the sort of "improvement" we are discussing. This particular question was, however, settled in *Mobile County v. Kimball*, 102 U. S. 691, 697-699:

Of the class of subjects local in their nature, or intended as mere aids to commerce, which are best provided for by special regulations, may be mentioned harbor pilotage, buoys and beacons to guide mariners to the proper channel in which to direct their vessels.

* * * * *

That power which every State possesses, sometimes termed its police power, by which it legislates for the protection of the lives, health, and property of its people, would justify measures of this kind.

* * * * *

Where, from the nature of the subject or the sphere of its operation, the case is local and limited, special regulations adapted to the immediate locality could only have been contemplated. State action upon such subjects can constitute no interference with the commercial power of Congress, for when that acts the State authority is superseded. Inaction of Congress

upon these subjects of a local nature or operation, unlike its inaction upon matters affecting all the States and requiring uniformity of regulation, is not to be taken as a declaration that nothing shall be done with respect to them but is rather to be deemed a declaration that for the time being, and until it sees fit to act, they may be regulated by state authority.

See also *Wisconsin v. Duluth*, 96 U. S. 379.

Incidentally, appellant persists in confusing the amount of diversion necessary for sewage disposal with the amount necessary to provide for a navigable canal. According to appellant's witnesses the former requires 10,000 c. s. f. According to the record, the latter requires 1,000 c. s. f. (Appellant's Narrative, p. 33; also see Rec. Vol. VI, pp. 3633-34; Vol. VII, p. 54.)

As authority for its contentions under this heading counsel cite *Cummings v. Chicago*, 188 U. S. 410; *Montgomery v. Portland*, 190 U. S. 89; and other cases which do not even remotely sustain its contention. They are discussed elsewhere (*supra*, p. 170).

It hardly seems necessary to distinguish the cases cited by appellant under its Point IV (b). Not one of them is in point. *New York v. Miln*, 11 Pet. 102, was overruled in *Henderson v. Mayor of New York*, 92 U. S. 259. None of the cases has to do with an attempted exercise of state authority in conflict with an assertion of paramount control by Congress.

Under its Point IV (c) appellant contends that "Congress has otherwise by legislation indicated that

it was not its intention to prohibit the operation of appellant's diversion works" (Appellant's Brief, p. 176). This question is not appropriate to a discussion of the state's supposed police power and we are treating it elsewhere. The supposed acquiescence of Congress is treated under our Point VIII (*infra*, p. 267).

The effect of the Niagara Falls Act is treated under our Point V, B. (*supra*, p. 219). The reports of the International Waterways Commission and the Canadian Boundary Water Treaty are discussed under our Point V, C (*supra*, p. 226). We pause only to call attention to the recurrent misstatement that—

This Commission [the International Waterways Commission] found the diversion of 10,000 second feet to be an existing fact. (Appellant's Brief, p. 178.)

That this is not true, see page 227 *supra*.

Appellant's interpretation of "the only purpose" of the resolution of Congress of April 21, 1904 (Appellant's Brief, p. 178), is, of course, without foundation in the record.

In conclusion we may appropriately call attention to remarks that this Court has made in other cases, in respect to appellant's contention. In *Wilkerson v. Rahrer*, 140 U. S. 545, this Court said (p. 557):

That which does not belong to commerce is within the jurisdiction of the police power of the State; and that which does belong to commerce is within the jurisdiction of the United States.

In *Wisconsin v. Duluth*, 96 U. S. 379, 386-387, this Court said:

We do not feel called upon to make an argument to prove that these statutes of the Congress of the United States, and these Acts of the Executive Department in carrying those statutes into effect, constitute an adoption of the canal and harbor improvement started by the City of Duluth, and a taking exclusive charge and control of it; that they amount to the declaration of the Federal Government, that we here interpose and assert our power; we take upon ourselves the burden of this improvement, which properly belongs to us, and that hereafter this work for the public good is in our hands and subject to our control.

If the merest recital of these Acts of Congress, and of the War Department under them, do not establish that proposition, we can have little hope of making it plain by elaborate argument.

Nor can there be any doubt that such action is within the constitutional power of Congress. It is a power which has been exercised ever since the government was organized under the Constitution. The only question ever raised has been, how far and under what circumstances the exercise of the power is exclusive of its exercise by the States. And while this court has maintained, in many cases, the right of the States to authorize structures in and over the navigable waters of the States, which may either impede or improve their navigation, in the absence of any action of the General Government in the same matter, the doctrine

has been laid down with unvarying uniformity, that when Congress has, by any expression of its will, occupied the field, that action was conclusive of any right to the contrary asserted under state authority. The adjudged cases in this court on this point are numerous.

In *United States v. Chandler-Dunbar Water Power Co.*, 229 U. S. 53, this Court said (p. 62):

All means having some positive relation to the end in view which are not forbidden by some other provision of the Constitution are admissible.

In *Wabash St. L. & P. Ry. Co. v. Illinois*, 118 U. S. 557, this Court said (p. 577):

And if it be a regulation of commerce * * * it must be of that national character, and the regulation can only appropriately exist by general rules and principles, which demand that it should be done by the Congress.

VIII

The right of Appellee to an injunction is not barred by laches, acquiescence, or estoppel

That appellee should be called upon to meet any such contention as is made in Point V of appellant's brief, is not without its humorous side. If ever a party to litigation were estopped from setting up a claim, it is appellant—by reason of its acceptance of the benefits and the conditions of the various permits and particularly the Wilmette and Calumet permits.

We shall not again set forth the facts (to which we have already been forced to make too frequent ref-

erence) bearing on appellant's charge of acquiescence, etc. They are reviewed in our Statement of the Case (*supra*, p. 21), and may be summarized as follows:

(1) No work in the building of the Canal was done until after the passage of the Act of September 19, 1890, which required the authorization of the Secretary of War for the modification of the condition of the navigable waters of the United States.

(2) The necessity for federal cooperation was stated to the appellant by the Government Engineering Department in 1892, prior to the commencement of work on the canal.

(3) The paramount control of the Government with respect to navigation was again asserted by the Government Engineering Department in 1893, immediately following the commencement of work on the canal.

(4) The question of the effect upon lake levels and the navigable capacity of the lakes and their connecting rivers was raised specifically by the Government Engineering Department in 1895, and notice with reference thereto was given to the appellant. This was during the early stages of the work, and long before the completion of the main channel of the canal. The Board made a report, in which the effect of the withdrawal was stated, and the control of the United States asserted.

(5) In 1896, when the appellant sought a permit to make changes in the Chicago River, it was stated in the official records that the question of whether

the District would be allowed by the United States and Great Britain to take any water at all from the Great Lakes, was one which must come up later for the action of the War Department, and in the permit, which was granted, it was expressly stated that it was not to cover obstructions to navigation by reason of the work while in progress or when it was completed. Of the grand total of over seventy-five million dollars which the appellant claims to have expended upon this work, less than twelve million dollars had been expended at this time. Of course, in drawing any comparison between the extent of the injury to navigation and the injury to the appellant in case it is not permitted to withdraw the water, the appellant, in any view of the situation, is limited to the amount it had expended at the time this permit was accepted and acted upon.

(6) From 1896 until the completion of the channel the appellant accepted and acted upon permits which, in express terms, recited the paramount authority of the Federal Government over modifications of the condition of navigable waters, and which provided that they were not to cover obstructions to navigation when the canal was completed.

(7) The Act of 1899, strengthening the authority of the United States officers and making the authorization of Congress itself necessary to the creation of an obstruction to navigable capacity, was passed prior to the completion of the main channel and before application was made for a permit to connect the canal with the Chicago River, and therefore prior

to the time when the question of the effect of the withdrawal of the water was presented in a way which called for a ruling.

(8) In the draft of permit which the appellant submitted on April 22, 1899, and which it requested the Government to issue, it is expressly recited that it is necessary, under the existing law, that authority should issue from the War Department under which the appellant might cause the waters of the Chicago River to flow to the west into the main channel of the canal. In the permit of May 8, 1899, the paramount authority of the Government is distinctly asserted, and the appellant accepted the benefit of this permit.

(9) The permit of May 8, 1899, was modified from time to time by the United States, sometimes upon its own motion and sometimes at the request of the appellant. These modifications, which in every case asserted the paramount authority of the Federal Government, were accepted by the appellant, and the benefits thereunder were enjoyed by the appellant.

(10) After the application to reverse the flow of the Calumet River was denied, in 1907, the appellant applied for and obtained a permit to withdraw water from Lake Michigan through the Wilmette branch of its canal. This permit expressly recited that the total amount to be withdrawn from the lake should not exceed the amount then authorized. The appellant accepted this permit with this condition, and then, on September 18, 1907, passed the order in

which it denied the authority of the United States to withhold the water which was required for the purposes of sanitation.

(11) The Calumet River suit was instituted on March 23, 1908, following appellee's defiance of authority by proceeding to construct the Calumet-Sag Canal. The bill of complaint alleged the intention of appellant to divert 4,000 c. s. f. through that canal; that the effect would be to lower the level of Lake Michigan, etc., and to modify the condition and obstruct the capacity of navigable waters of the United States. The prayer of the bill was for an injunction restraining appellant from reversing the flow of the river and from withdrawing from Lake Michigan any water except as authorized by the Department of War (amount of water thus authorized being then 4,167 c. s. f.).

(12) The actual diversion by appellant from 1900 to 1913, according to appellant's chief engineer, was as follows:

Year	Cubic second-foot
1900	4,314
1901	4,437
1902	4,569
1903	5,144
1904	5,271
1905	5,381
1906	6,292
1907	6,444
1908	6,596
1909	6,970
1910	7,132
1911	7,205
1912	7,458
1913	7,610

(Rec. Vol. III, p. 1318.)

The above shows that in 1900 the appellant did not take as much as 300,000 cubic feet per minute, and that for several years thereafter it was not diverting enough more than 250,000 to be apparent to the eye. As late as 1909, the appellant refused to give to the International Waterways Commission access to its records or information as to the amount of its withdrawal. The report of the International Waterways Commission of January 8, 1910 (Rec. Vol. VII, p. 253) indicates that the U. S. Engineer Office at Chicago had figures showing the diversion from January, 1900, to June, 1904, but that beyond that date figures were unobtainable. The Commission assumed "that the flow through the canal since June, 1904, * * * to be 4,167 cubic feet per second, the quantity authorized in the permit of the Secretary of War."

(13) The permit to reverse the flow of the Calumet River was obtained in 1910 upon the express understanding that it should not be used in any way to affect the pending litigation with respect to the withdrawal of water through the Calumet River, and contained a similar restriction on the total diversion.

(14) In 1912 the appellant made application to the Secretary of War for a permit to withdraw 10,000 cubic feet per second from Lake Michigan through its various channels. There was a formal hearing upon this application at which the Canadian Government was represented. The claims of the Canadian Government were presented, and the appellant replied to those claims. There was a finding by the

Secretary of War upon the claims of Canada as to injury to its navigable waters.

(15) The decision of the Secretary of War was rendered January 8, 1913. On October 6, 1913, the Main Channel suit was instituted.

(16) None of the delays in the prosecution of either the Calumet River suit or the Main Channel suit are due to appellee. They are due (1) to delays caused by appellant, and (2) the unwillingness of Judge Landis to render an immediate decision. (Rec. Vol. VIII, p. 149.)

It is submitted that these facts do not show any authority from the United States for the diversion of this water, or any acquiescence in the act of the appellant; on the contrary, they show a recognition by the appellant of the paramount right of control on the part of the United States which is asserted in this case.

Appellant also seeks to construct some sort of invitation from the United States by citing extracts from reports of Government engineers. It may be conceded that for nearly fifty years the question of the improvement of navigation between Lake Michigan and the Mississippi river has been under consideration. There have been many surveys; many projects have been discussed; tentative plans have been stated, but there has never been any specific plan adopted by the Engineer Department or authorized by Congress. An examination of the Government surveys and reports shows that they are utterly different in their nature from the appellant's

project, and they cannot be interpreted as an invitation to divert from Lake Michigan ten times the quantity of water required for purposes of navigation under any project that has received consideration. (See Rec. Vol. IV, p. 2240, 2248, 2249, 2252, 2254, 2259-61, 2165-66, 2371-2372, 2188, 2204, 2579-80, 2582-2603.)

It is significant that the Bridge Company in the *Wheeling Bridge Case*, 13 How. 553, made exactly the same contentions (p. 558):

* * * that the bridge is a connecting link of a great public highway, as important as the navigation of the Ohio River; that Pennsylvania had set the example of authorizing bridges across the Ohio; that certain engineers of the United States had recommended a wire suspension bridge at Wheeling, and gave as their opinion that "by an elevation of ninety feet, every imaginable danger of obstructing the navigation would be avoided"; that certain reports of committees in Congress recognized the necessity of a bridge at Wheeling, and recommended an appropriation for that purpose; that the headway for steamers left by the bridge is amply sufficient, forty-seven feet above the water, for all useful purposes; and if sufficient draught can not be had at that height, blowers might be added; that chimneys might have hinges on them; so as to be lowered without much inconvenience; that the bridge will not be an appreciable inconvenience to the average class of boats; that the bridge will not diminish or destroy trade between

Pittsburgh and other ports, or do irreparable injury to the citizens of Pennsylvania.

In view of the fact that these contentions were all passed upon unfavorably by this Court in that case, there seems little room for appellant's present claims in this regard.

We now call attention to well-settled principles which are, we submit, conclusive against all claims of estoppel, etc., on the part of appellant.

A

Any contention that appellee's right to an injunction is barred by laches is untenable

1. Even as between private persons where delay is induced by act or representation of one person, the doctrine of laches is never applied in his favor against the other. In *Loring v. Palmer*, 118 U. S. 321, 345-6, the Court said:

His delay in bringing the suit is to be construed in connection with the uncertainty that existed as to the true situation of his accounts. Loring must have known that Palmer relied on him to keep the accounts, and having himself been guilty of such glaring errors in his statements and in his claims, Palmer is not to be charged alone with the fault of delay.

* * * It is clear that, if Palmer had known the actual condition of the accounts at the time, he would promptly have claimed his rights, and that, to say the least, Loring was as much responsible for this uncertainty as Palmer.

In *Townsend v. Vanderwerker*, 160 U. S. 171, 186, this Court said:

The question of laches does not depend, as does the statute of limitation, upon the fact that a certain definite time has elapsed since the cause of action accrued, but whether, under all the circumstances of the particular case, plaintiff is chargeable with a want of due diligence in failing to institute proceedings before he did. In this case we think the delay is fully explained.

In *Gunton v. Carroll*, 101 U. S. 426, 429:

The delay in making it [a partition which was prerequisite to suit for specific performance] was that of Carroll and of his devisees. For this the complainants were in no manner chargeable with laches and should receive no detriment. (Citing cases.)

2. Laches, however long continued, is not imputable against the United States to bar it of its sovereign rights. In *United States v. Kirkpatrick*, 9 Wheat. 720, 735, this Court said:

The general principle is that laches is not imputable to the Government; and this maxim is founded, not in the notion of extraordinary prerogative, but upon a great public policy. The Government can transact its business only through its agents; and its fiscal operations are so various and its agencies so numerous and scattered, that the utmost vigilance would not save the public from the most serious losses, if the doctrine of laches can be applied to its transactions.

In the case of *United States v. Beebe*, 180 U. S. 343, 354, this Court said:

Generally speaking, the laches of officers of the Government can not be set up as a defense to a claim made by the Government. (Citing cases.)

In *Armstrong v. Morrill*, 14 Wall. 120, 144-5, this Court said:

But the court held that the limitation (a restrictive condition) could not be extinguished by any inattention or neglect in compelling the owner to comply with it, for no laches is to be imputed to the Government and against it no time runs so as to bar the public rights, which is no more nor less than another form of words for expressing the ancient rule of the common law that time does not run against the State.

See also *United States v. Dalles, M. R.*, 140 U. S. 632; *United States v. Insley*, 130 U. S. 263; *Metro-
politan Ry. Co. v. District of Columbia*, 132 U. S. 11; *United States v. Michigan*, 190 U. S. 405; *Redfield
v. Parks*, 132 U. S. 243-4. In the last case it was held that State legislation could not operate to change this rule, the Court saying (pp. 243-4):

The foundation of this rule is the proposition that time does not run against the Government, that no statute of limitation affects the rights of the Government, unless there is an express provision to that effect in the statute, and even then it can not be conceded that State legislation can in this manner imperil

the rights of the United States or overcome the general principle that it is not amenable to the statute of limitations or the doctrine of laches.

In the case of *United States v. Michigan*, *supra*, a case very like the case at bar, involving a grant in aid of a canal, and authorizing statutes of the State of Michigan, the existence of those statutes did not prevent the application of the rule here contended for. The case of *Missouri v. Illinois and Sanitary district*, 180 U. S. 208, involved the very State legislation and district powers that are involved in this case. It was urged against the right of Missouri to complain of the flow of sewage that it was barred by reason of laches and the action taken and expenditures made under the State legislation. It was contended on behalf of the defendants—

if the bill was not prematurely filed, then it was filed too late; that by standing by for so long a period the complainant was guilty of such laches that a court of equity will not grant relief.

Of this claim the court said (p. 245):

The inconsistency between these contentions is manifest, and on consideration we are of opinion that the suggestion that the complainant's remedy has been lost by delay, is not founded in fact or reason.

(See also same case, 200 U. S. 496, 520.)

B

Any contention that appellee's right to an injunction is barred by acquiescence is untenable.

1. This feature so far as it involves alleged non-action during the period the appellant was operating under the State statutes and later making expenditures on the original project is disposed of by *Union Bridge Co. v. United States*, 204 U. S. 364, 400, as follows:

There are no circumstances connected with the original construction of the bridge, or with its maintenance since, which so tie the hands of the Government that it can not exert its full power to protect the freedom of navigation against obstructions. Although the bridge, when erected under the authority of a Pennsylvania charter may have been a lawful structure, and although it may not have been an unreasonable obstruction to commerce and navigation as then carried on, it must be taken under the cases cited, and upon principle, not only that the company when exerting the power conferred upon it by the State, did so with knowledge of the paramount authority of Congress to regulate commerce among the States, but that it erected the bridge subject to the possibility that Congress might, at some future time, when the public interest demanded, exert its power by appropriate legislation to protect navigation against unreasonable obstructions. Even if the bridge, in its original form, was an unreasonable obstruction to navigation, the mere failure of the United States, at the

time, to intervene by its officers or by legislation and prevent its erection, could not create an obligation on the part of the Government, etc. * * * Its mere silence or inaction when individuals or corporations, under the authority of the State, place unreasonable obstructions in the waterways of the United States, can not have the effect to cast upon the Government an obligation not to exert its constitutional power to regulate interstate commerce.

In *Rundle v. Canal Co.*, 14 How. (U. S.) 92, the court quotes the Supreme Court of Pennsylvania, as follows:

And, in this respect, a grant by a public agent of limited powers, and bound not to throw away the interests confided to it, is different from a grant by an individual who is master of the subject. To revoke the latter after an expenditure in the prosecution of it, would be a fraud. But he who accepts a license from the legislature, knowing that he is dealing with an agent bound by duty not to impair public rights, does so at his risk; and a voluntary expenditure on the foot [faith] of it gives him no claim to compensation.

So far as it involves action or omission by officers or Congress, the matter will be treated under "Estoppel" *infra*, p. 270.

2. Acquiescence in work or expenditures while there was no suggestion of use of more than permitted quantities of water is no estoppel to object to a later plan calling for greater quantities of water. Nor does acquiescence, as to the Chicago River, estop to object

to a later plan to change the channel or current of the Calumet, any more than acquiescence in a Chicago project would estop to object to a Milwaukee project.

In *Los Angeles W. Co. v. City*, 88 Fed. 720, 745-6, the court said:

Defendants further contend that complainants have so acquiesced in the action of the council in the fixing of water rates as to estop them * * * and also have been guilty of such laches * * * as is fatal. * * * This contention, in my opinion, is not well taken. * * * But, even if the complainants had not protested, *their acquiescence in ordinances establishing rates prior to the year 1896 would not be acquiescence in the ordinance of that year*, for the obvious reason that the last-named ordinance made a greater reduction of rates than any previous ordinance.

3. Moreover, having itself induced the appellee's delay by its methods and representation, the appellant is estopped from urging either delay or acquiescence.

Bridge Co. v. United States, 105 U. S. 482.

Branch v. Jesup, 106 U. S. 468.

International Contracting Co. v. Lamont, 155 U. S. 309-10.

Moran v. Comm., 2 Black 732.

Wallace v. Loomis, 97 U. S. 163.

County v. Barnes, 94 U. S. 70, 73.

and cases cited *supra* under sub-heading A (1), *supra*, p. 263.

4. Finally, while you may balance equities through expenditures, as between two *otherwise equal* rights or powers, to determine superiority, this may never

be done between a superior and inferior power or right, because the superior power must always be superior, and there is nothing to be determined. (In re *Rahrer*, 140 U. S. 555, 556, 557; *Houston & Texas Ry. v. United States*, 234 U. S. 350, 351, 352.)

Any contention that appellee's right to an injunction is barred by estoppel is untenable

There can be no estoppel against the Government in this case, because (1) the acts complained of constitute a public nuisance; (2) a revocable license can never support an estoppel; (3) officers whose acts are relied on have no power to grant the privilege; (4) mere appropriations to *investigate* are immaterial; (5) cooperation in improving Chicago River was merely for betterment of navigation; (6) toleration of other diversion or diversions by Government is immaterial; (7) there was not a dollar spent on later Calumet project on the faith of any congressional action.

We have dealt elsewhere (Point V, *supra*, p. 203) with the contention that the Act of Congress of 1827 relating to the Illinois and Michigan Canal, the Boundary Waters Treaty, and the Niagara Falls Act can be construed as authority for appellant's unlawful acts.

(4) ESTOPPEL CAN NEVER BE URGED IN FAVOR OF A PUBLIC NUISANCE

Any unlawful interference with navigation is a public nuisance *per se*.

The author, Joyce, on Nuisances, defining the terms, says, A nuisance consists in unlawfully doing any act which (3) unlawfully interferes with or obstructs, or tends to obstruct, any navigable lake, reservoir, etc. (sec. 4, pp. 8-9), and such nuisance (per se) is an obstruction to a navigable stream. (Sec. 12, p. 20.)

In *Phalen v. Virginia*, 8 How. (U. S.) 163, this court said (p. 168):

It is a principle of the common law, that
the king can not sanction a nuisance.

In *People v. Gold Run D. & M. Co.*, 66 Cal. 152, this court said:

As to the claim of right derived from prescription and the statute of limitations, it is sufficient to say that a right to continue a public nuisance can not be acquired by prescription. (Citing cases.) Nor can it be legalized by lapse of time * * *

Against it, however long continued, the State is bound to protect the people. * * *
(Noting *People v. Booth*, 32 N. Y. 397.)
"For all the people of the State are interested in the question, and have the right to use all bays and navigable rivers within the State."

In *Missouri v. Illinois and Sanitary District*, 180 U. S. 242-3, this court said:

In the first place, it is urged that the drawing, by artificial means, of the sewage of the city of Chicago into the Mississippi River may or may not become a nuisance * * *.

The court then cites *Attorney General v. Jamaica Pond Aq. Corp.*, 188 Mass. 361, which action was to enjoin defendants from lowering the waters in one of the public ponds of Massachusetts, and it quotes from the opinion in that case, as follows, p. 363:

The cases are numerous in which it has been held that the attorney general may maintain an information in equity to restrain a corporation exercising the right of eminent domain under a power delegated to it by the legislature, from any abuse or perversion of the powers which may create a public nuisance or injuriously affect or endanger the public interests.

The closing language in the court's opinion (p. 248) in the main case (*Sanitary District case*) is not apposite here because (1) Missouri had no power superior to that of Illinois; (2) any substantial interference with a superior power warrants and demands injunctive protection.

(2) ESTOPPEL IS NEVER APPLIED WHERE, HAD A PRIVILEGE BEEN GRANTED, IT MUST HAVE BEEN REVOCABLE ONLY

In *Rundle v. Canal Co.*, 14 How. (U. S.) 92-3, involving a legislative grant to build a mill dam in a navigable river, which dam was rendered useless by a later authorized canal, this court quotes from the Supreme Court of Pennsylvania in a like case, as follows:

"He was bound to know that the State had power to revoke its license whenever the

paramount interests of the public should require it. * * * But he who accepts a license from the legislature knowing that he is dealing with an agent bound by duty not to impair public rights, does so at his risk * * *." [The court itself then continues:] Nor can the plaintiff claim by prescription against the public for more than the act confers on him, which is at best impunity for a nuisance.

In *Doyle v. Continental Insurance Co.*, 94 U. S. 535, 540-2, this court said:

The correlative power to revoke or recall a permission is a necessary consequence of the main power * * * [citing cases] This is justifiable because the complainant has no constitutional right to do business in that State. * * * This is the whole point of the case, and, without reference to the injustice, the prejudice, or the wrong that is alleged to exist, must determine the question. No right of the complainant * * * is infringed, etc.

In *Morris v. United States*, 174 U. S. 196, 282, this court said:

Here we may pause to observe that the only power given to the commissioners was to grant licenses, from time to time, and *until* Congress should assume and exercise its jurisdiction within the territory, and it was declared that any wharf built in the waters of the Potomac without such license or in disregard of its provisions, was declared to be a common nuisance.

The licenses contemplated therefore were temporary, and liable to be withdrawn by Congress on assuming jurisdiction. Such legislation certainly can not be relied on as either conferring or recognizing rights to erect and maintain permanent wharves within the waters of the Potomac and the Eastern Branch.

The appellant was bound to know when it turned toward these navigable waters that though it gained permits they could never pass more than a revocable license. Unless it was willing to take that hazard, it was bound to seek out and develop some other system. Here there was not only *express* refusal to permit any of the acts here complained of, but such permits as were given were accompanied by such conditions as amply justified the later refusals.

In *Lowndes v. Huntington*, 153 U. S. 32, involving a claim of right to use a navigable bay for oyster cultivation, this court said:

In other words, all he claims is that he had an implied license from the State; but such license (if one existed) was subject to revocation and was revoked, etc.

In *St. Anthony Falls W. P. Co. v. St. Paul W. Comm.*, 168 U. S. 349, 372-3, wherein the power company *claimed property rights* under State charter in navigable waters, this court said:

These grants were in legal effect subject at all times to the paramount right of the State as trustee for the public to divert a portion of the waters for public uses, and they were also

subject to the rights in regard to navigation and commerce existing in the General Government under the Constitution of the United States. [Citing cases.]

* * * This construction * * * assumes the power of a * * * legislature to bind future legislatures in dealing with these public rights * * * (which, under the decision of this court in *Illinois Central Railroad v. Illinois*, 146 U. S. 387, is at least doubtful), etc.

The court then cites and approves *Rundle v. Canal Company*, supra.

(3) ACTS OF OFFICERS

Reports of engineering officers, communications of International Waterways Commission, action of the Attorney General, establishment of plans by engineers, etc., can not foreclose sovereign rights in respect to which the officers have no power to act for the United States (in granting privileges). See excerpt from the *Wheeling Bridge Case* (supra, p. 267).

In *Pine River Logging Co. v. United States*, 186 U. S. 279, 291, this court said:

No authority had been given them to extend the contracts either as to the quantity or quality of timber to be cut. * * * They, as well as the parties thereto, were equally bound by its provisions. * * * No conduct of theirs can estop the Government from asserting its rights to recover for timber cut beyond the quantity and quality specified in the contract. [Citing cases.] We are there-

fore of opinion that the defendants can not take refuge under the consent or acquiescence of the Government agent in the disregard of these contracts.

In *Whiteside et al. v. United States*, 93 U. S. 247, 257, this court said:

The rule as to the effect of the like act of a public agent is otherwise, for the reason that it is better that an individual should occasionally suffer from the mistakes of public officers or agents, than to adopt a rule which, through improper combinations or collusion, might be turned to the detriment and injury of the public * * * And it is clear that if the cotton was abandoned or captured property, within the meaning of the act of Congress, under which it was collected, transported, and stored, the acts of the officer were unauthorized and unlawful.

In this case it was held that a release of the cotton by officers was not binding on the United States.

In *Morris v. United States*, 174 U. S. 196, 288, this court said:

It was the opinion of the court below that under the legislation * * * jurisdiction with respect to private wharves had been conferred upon the authorities of the city, and that hence the Chief Engineer is without any lawful authority to issue such licenses. * * * We see no reason to doubt the soundness of this conclusion, though for the reasons already given, even if the power to grant such licenses had belonged to the Chief of Engineers, they would not have vested any rights in fee, etc.

The appellant not only knew that the Secretary was claiming jurisdiction as the agent of Congress, but at least until 1907, conceded the Secretary's jurisdiction.

In *Williams v. Wadsworth*, 51 Conn. 277, 310, the court said:

The defendant having knowledge that the plaintiff disputed his right to divert the water in the manner contemplated and would endeavor to prevent it by legal proceedings, notified him that he intended to take the water to his dwelling house, and requested him to institute legal proceedings by way of prevention before expense should be incurred. The plaintiff disregarded the request, and the defendant insists that he should not now be heard by way of objection. * * * Thenceforth the defendant assumed the risk attendant upon his action.

The foregoing completely answers any suggestion that the recital in the petition of November 28, 1906, of a desire to have the Government consent before incurring expense as to the Little Calumet, could limit the rights of the Government or enlarge those of the district.

In *State, etc., v. Brewer*, 64 Ala. 298, the court said:

Estoppels against the State can not be favored. They may arise from its express grants; but can not arise from the laches of its officers. * * * It was not within the scope of the powers of the auditor to allow the credit, etc.

In note to *State of Michigan v. Jackson, etc., Co.* C. C. A. 345, 354, it was said:

But, on the other hand, the State can not be bound, either on the ground of estoppel, acquiescence, or implied ratification, by any acts of its officers which are beyond the scope of their authority, or which are illegal, fraudulent, or negligent, or by defaults or omissions of such officers possessing the same characteristics. [Citing cases, among others *Hunter v. United States*, 5 Pet. 173, and *People v. Brown*, 67 Ill. 435.]

See also *Floyd Acceptances*, 7 Wall. 666; *Lee v. Munroe*, 7 Cranch 366, 3 L. ed. 373; *State v. Chilton*, 49 W. Va. 453; *Pulaski v. State*, 42 Ark. 118.

In *City of Mobile v. Sullivan Timber Co.*, 129 Fed. 302-3, the court said:

Surely it will take something more than proof of the quiescence of a commission like that [Mobile River Commission] to estop the municipality which holds the title for the public benefit from proceeding with its duty to protect the public interest. Estoppels are not favored by the law, and this would seem especially true when by such estoppel it is attempted, by the omission or indifference of officials, to finally conclude the rights of the public to a public use.

The court quotes from *Mayor of Jersey City v. American Dock, etc., Co.*, 23 Atl. 682, 684, as follows:

The title is vested in the city in trust for the public, and is therefore inalienable and

indeposable, except by legislative action. The composition of the so-called title of the defendant, it will be observed, consists of the acquiescence and neglect of the trustee of a public use and the deed of a board having no power over the subject. Such a claim seems to me singularly futile.

(4) CONGRESSIONAL APPROPRIATION TO INVESTIGATE IMPROVEMENT OF NAVIGATION IN ILLINOIS AND DES PLAINES RIVERS CAN NOT CONSTITUTE ESTOPPEL

No doubt Congress, ever since the Act of 1822 (providing for Illinois and Michigan Canal), has steadily had in mind connecting the Lakes with the Mississippi River for purposes of navigation. It would have eagerly invited the construction not of one but of many connecting channels, all with an eye single to interior navigation, and it often has investigated many suggested projects; but an appropriation to investigate methods of improving navigability of the Illinois and Des Plaines Rivers can not be warped into a permit to convert the Calumet River into a sewer, or a permit to withdraw 10,000 cubic second-feet of water from Lake Michigan. Nor, indeed, could an appropriation directly to investigate the propriety of suffering such a withdrawal be twisted into a permit so to do. One may send an agent to investigate the proposed purchase of a cattle ranch, but it will not constitute an agreement on his part to purchase, nor authorize the owner to urge estoppel by reason of assumption that he would purchase.

One may incur expense in determining whether he ought to consent to a railroad right of way across his farm, but this does not estop him from disputing the railroad's right to cross.

In the pleading, and throughout this case, the appellant has subtly sought to obscure the plain distinction between navigation and sewage. The latter demands many times the volume of flow needed for the former. Furnishing the flow necessary for the former would not at all injure navigation, but furnishing the added flow now said to be needed for sewage, does. The appellant, and before its creation, the city of Chicago, began by arrangement with the State as early as 1858, to try to connect itself with navigation channels, and particularly the Illinois and Michigan Canal; and in the several petitions to the Secretary of War it kept prominently to the front the suggestion the *benefit of navigation*, and sedulously screened the underlying motive of sewage. The Government properly consented to straightening and enlarging the Chicago River channel, always with the condition of a withdrawal limit which finally became 4,167 cubic second-feet; and not until 1912 did the appellant make application for any more. It did most of its work on the representation that that amount would meet their needs. And if the project would admit of no larger withdrawal, and it were not threatening to withdraw more, this suit would not be pending. Until the threat to injure the public right of navigation there

was no occasion to appeal to the courts, just as until the sewage deposits threatened became objectionable to the State of Missouri, there was no occasion for it to appeal to the courts. (*Missouri v. Sanitary District*, 180 U. S. 208, 243-5-6-7.)

(5) COOPERATION IN IMPROVEMENT OF CHICAGO
RIVER

This was for the sole purpose of bettering navigation. All that has been said under the heading last above applies here. The Government would have no objection to-day to widening or deepening of channels so long as the lake withdrawals were limited to the maximum of its permit. And the appellant induced the Government's belief that it would not require more than the permitted amount.

(6) SUFFERING OTHERS, INCLUDING CANADA, TO LOWER,
AND LOWERING BY ITS OWN WORKS, CANNOT
CONSTITUTE ESTOPPEL

The Government was entirely within its rights had this been done, for the whole subject is in the exclusive control of Congress and no outsider can complain of its permits or undertake to regulate or apportion them for Congress. The City of Milwaukee could not urge the 4,167 cubic second-foot authorized at Chicago as a justification for diverting whatever added amount it desired from the lake without a permit.

Per contra: The appellant can not urge other diversions, whether permitted or merely suffered, as a justification for its diverting without a permit.

Indeed, it was to avoid just such controversy that Congress required *national assent to any diversion whatever*.

(7) GOVERNMENT WORK OF DEEPENING CHANNELS OF GREAT LAKES CAN NOT CONSTITUTE ESTOPPEL

It is said this will overcome the effect of the appellant's proposed withdrawal of water. History shows a steady artificial deepening of the harbors and channels of the lakes and connecting rivers by the Government at enormous cost. Confessedly the appellant's acts will somewhat shoal them. Some boat that could have just passed over a bar before would be caught now. The tendency is to diminish and to interfere with navigable capacity. It will not do to say that the shoaling will be less than the Government has allowed for, or that compensating works proposed in order to raise the water a foot on Lake Erie would more than cover the lowering caused by the district. The Government, if it planned compensating works, did so to get deeper water because deeper water was demanded—not to hold the water constant against the unlawful diversion of the appellant or of others similarly situated. If it used a lower plane, it did so for precautionary purposes. "No person can found a right on his own wrong," nor on the effort by another to guard against the consequences of that wrong. If appellant could urge these features, so could every other city or person diverting. Every foot of deepening accomplished by the Government would be made an excuse

for lowering by others of a like amount, until the Government's increase of depth would spell disaster instead of benefit to navigation. This principle applied to the very great deepening accomplished in the past would have to-day resulted in leaving the lakes with a net depth for navigation purposes no greater than when Federal improvement of lake waters began.

IX

Appellee is entitled to an injunction, effective immediately, restraining appellant from diverting more than 4,167 c. s. f.

Appellant makes five contentions which for convenience we are treating under one heading:

A. That the Attorney General has no authority to institute suit for an injunction restraining the maintenance of an obstruction. (Appellant's Point III (b).)

B. That the doctrine of comparative injury applies and therefore a court of equity should deny relief. (Appellant's Point VII.)

C. That appellant's motion of July 12, 1920, should have been allowed, and a modified injunction allowed conditional on the construction and maintenance of compensating works in the Great Lakes. (Appellant's Point IX (a).)

D. That the operation of the injunction should be suspended for a period of years. (Appellant's Point IX (b).)

E. That the decree of injunction should provide that it should be subject to any further action that

the Secretary of War might take. (Appellant's Point IX (c).)

These will be discussed in the same order as above noted.

A

The Attorney General has authority to institute suit for an injunction in aid of the performance of the Government's duty to preserve the navigability of navigable waters of the United States

Under its Point III, subheading (b), appellant contends that the Attorney General, under the Act of March 3, 1899, is only authorized to institute suits in equity for the *removal of structures*, and that the District Court was without jurisdiction to entertain this suit or enter the decree. A search of the record discloses that nowhere either in the pleadings or by motion or in the evidence or during the hearing was the jurisdiction of the District Court as a court of equity questioned and that both parties treated the case as a proper case for equity jurisdiction. Judge Carpenter stated, in his opinion (Rec. Vol. VIII, p. 129) "The jurisdiction of the court has not and could not be challenged." *Proceedings for bill for injunction rather than by indictment were at the request of the appellant itself.* (See Statement of the case, p. 66). Inasmuch, however, as the point is made, we make reply to it.

A portion of the Calumet permit of June 30, 1910, may appropriately be quoted here:

That this permission shall in nowise affect or in any manner be used in the friendly suit now pending in the Circuit Court of the United States for the Northern District of Illinois

brought by the United States of America against the Sanitary District of Chicago, to determine the right of the said Sanitary District to divert from Lake Michigan for sanitary purposes an amount of water in excess of that now being diverted, without having first obtained a permit from the Secretary of War. (Rec. Vol. VII, p. 28.)

The appellant therefore has been perfectly content to have its right determined by a court of equity on a bill for an injunction, both in the Calumet River suit and in the Main Channel suit.

(1) SECTION 12 OF THE ACT OF MARCH 3, 1899 IS SUFFICIENT AUTHORITY FOR THE INSTANT SUIT

Section 12 of the Act of March 3, 1899 provides that—

the removal of any structures or parts of structures erected in violation if the provisions of the said sections may be enforced by the injunction of any circuit court exercising jurisdiction in any district in which such structures may exist and proper proceedings to this end may be instituted under the direction of the Attorney General of the United States.

Appellant contends that because of this provision the Attorney General can sue only to *remove* structures or parts of structures erected in violation of Section 10, and that in the present case he is not suing to *remove* any structures. A sufficient answer to this contention would seem to be the recent decision of this Court in *Economy Light & Power Co.*,

256 U. S. 113. In that case the defendant had commenced the construction of a dam across the Des Plaines River in Illinois. The decree not only ordered the removal of the portion already constructed but perpetually enjoined the defendant from placing any further obstruction in the river and from doing any other act or performing any other work in connection with the construction of the dam. (See *Economy Light & Power Co. v. United States*, C. C. A., 7th Circuit, 256 Fed. 792, 793.) The decree was affirmed in the Circuit Court of Appeals for the Seventh Circuit and by this Court in *Economy Light & Power Co. v. United States*, 256 U. S. 113. It is apparent from the opinion of this Court that the suit was regarded merely as one to enjoin the construction of a *proposed* dam; for example, it is stated (p. 115):

This was a suit brought by the United States against appellant in the district court for the northern district of Illinois, eastern division, for an injunction to restrain defendant from constructing a dam in the Des Plaines river at a point in Grundy county, Illinois, without the consent of Congress or authority of the legislature of the state, and without approval of the location and plans by the Chief of Engineers and the Secretary of War of the United States. Relief was prayed upon two grounds: (1) That the river bed where the dam was being constructed was the property of the United States; (2) that the Des Plaines river was a navigable waterway of the United States, and the *proposed* construction of a dam therein

was in violation of the Act of Congress of March 3, 1899 (chap. 425, § 9, 30 Stat. at L. 1121, 1151; Comp. Stat., § 9971, 9 Fed. Stat. Anno.; 2d ed., p. 81).

Throughout the opinion the obstruction is referred to as the "proposed dam."

If appellant's construction of Section 12 be correct, then the United States is powerless to prevent an obstruction to the navigable capacity of its navigable waters until the obstruction is at least partially accomplished. The Attorney General can sue only to *remove* structures or parts of structures, erected in violation of the Act of 1899. But such a construction leads to absurd results that could never have been intended by Congress. The very first act in building a dam or a bridge may be the throwing of a cable or a girder across a stream. Once even this much is accomplished, the most injurious results may be effected by the blocking of the stream to all navigation and yet the injured parties must await, according to appellant, until a court has ordered the *removal* of the cable or girder; they may not, knowing the plans of a defendant to do such an act, *restrain* its accomplishment before the harm is done. Suppose that a defendant, intending to throw a bridge across a river, first builds the approaches and supports on land belonging to him on both sides of the river. These structures in themselves are not in violation of any law. Must the United States wait until he throws a cable across? Or a person may be planning to sink a vessel in a stream for the purpose of blocking

traffic or for some purpose of his own. Must everyone, including the United States, wait until this is accomplished and the arduous task of removing the wreck is ordered by a court?

But, says appellant, we concede that an injunction may issue in such a case, but it must be against a *structure*, and a diversion is not a structure. Having conceded that the word *remove* must receive a liberal interpretation in the light of the undoubted intent of Congress, appellant must, we believe, concede that the word *structure* should receive a similarly liberal interpretation. There are several considerations, however, which lend confirmation to this:

(1) The word *structure* was intended to be at least coordinate with the *obstructions* covered by the preceding sections 9, 10, and 11. The cognate derivation of the two words indicates that much. It is usually some sort of *structure* which causes the *obstruction*. For example, in *United States v. Rio Grande Dam & Irrigation Co.*, 174 U. S. 690, the *obstruction* was a lowering of the level of the navigable portion of the Rio Grande River, by reason of a diversion of water in its nonnavigable portion; the offending *structure* was a dam in the nonnavigable portion. In the instant case, the *obstruction* is the lowering of the level of the Great Lakes, by reason of a diversion of water in the West Fork of the South Branch of the Chicago River; the offending *structure* is the works of appellant which divert, under the operation of appell-

ant's agents, an unauthorized amount of water. In either case, the purpose of the statute is to remove the obstruction by removing its cause. The word *structure* means anything which causes an *obstruction*.

(2) Congress intended by the Act of March 3, 1899, to *extend*, not to *limit*, the scope of Federal control over obstructions and modifications of the navigable capacity of navigable waters. This is clear from other provisions in the Act, as well as the considerations which led to its enactment.

(3) An act such as the Act of March 3, 1899, must be liberally construed in favor of the paramount right of which it purports to be an exercise. "The language * * * must be given full scope." (*United States v. Rio Grande Dam & Irrigation Co.*, *supra*.)

(4) Congress could never have intended to leave to the hazard of a jury a question such as is presented in the instant case. The delay incident to criminal proceedings would make it fatal to the object sought to be accomplished, i. e., the preservation of the navigable capacity of navigable waters of the United States. A judgment on an indictment would not remove the obstruction. Finally, it would be impossible to persuade a jury to convict in a community receiving the benefits of the appellant's unlawful acts.

(5) In the Act of 1890, Section 10 provided that injunction proceedings might be instituted to enjoin *obstructions*. Section 12 of the Act of 1899 was

intended to have a broader scope and to cover all structures in violation of Sections 9, 10, and 11, whether the structures amounted to, or caused, obstructions, or were merely unlawful modifications of the condition of a navigable water, not amounting to obstructions.

In *Virginia v. Tennessee*, 148 U. S. 519, this Court said:

And the meaning of a term may be enlarged or restrained by reference to the *object* of the whole clause in which it is used.

See also *United States v. Freeman*, 3 How. 565 and *Jones v. Guaranty Co.*, 101 U. S. 626.

We submit that the maxim "*noscitur a sociis*" is aptly applied in interpreting the word "*structure*". The associated words are to be found in what is prohibited in Sections 9, 10, and 11. (*Virginia v. Tennessee*, *supra*, p. 519.)

(2) INDEPENDENTLY OF SECTION 12, THERE IS SUFFICIENT AUTHORITY FOR THE INSTANT SUIT

Let us assume that Section 12 of the Act of 1899 does not apply to the present case. Appellant contends that if this is so there is an implied *denial* of authority from Congress for the institution of the instant suit. The basis for this contention rests chiefly on the provision contained in Section 10 of the Act of 1890 authorizing the removal of obstructions by suit for injunction. This, according to appellant, has been repealed and is an indication that no such

authority was longer to be given the Attorney-General of the United States.

It is by no means certain that this portion of a Section 10 of the Act of 1890 was repealed. Section 20 of the Act of 1899 (30 Stat. 1155) provided in part that all laws or parts of laws inconsistent with the foregoing Sections 10 to 20, inclusive, of this Act are hereby repealed.

Whether the injunction clause in Section 10 of the Act of 1890 was thus repealed depends upon whether it is inconsistent with any portion of the later Act, and this has never been decided.

Assuming, however, that all of Section 10 of the Act of 1890 was repealed, this could not have been intended to operate as a denial of the right to sue for an injunction in such cases as the present, for the following reasons:

(1) In 1895 this Court rendered its decision in *Re Debs*, 158 U. S. 564, and upheld for the first time the broad power of the United States to protect interstate commerce from interference without either a showing of pecuniary interest or specific statutory authority from Congress. The question had been one of extreme doubt before that time. Congress must be assumed to have known of that decision and to have regarded it unnecessary thereafter to insert specific statutory authority for injunction suits in such matters, and to have taken it for granted that the United States had such power anyway.

(2) The reason for the insertion of the clause in Section 12 of the Act of 1899, providing for the

removal of structures must then be taken to insure that the United States could *remove* the structures as well as prevent their construction, a power not always incident to suits for injunctions and resembling rather the *abatement* of a nuisance.

(3) Another reason for the insertion of the clause in Section 12 of the Act of 1899 may well be that not all structures erected in violation of Sections 9, 10, and 11 of that Act amounted to *obstructions*, and Congress wanted to insure power to remove them also.

(4) The considerations numbered (2), (3), and (4) above mentioned in the preceding heading with regard to the interpretation of the word *structure* are also persuasive that Congress did not, by Section 12, intend to deny to the United States rights which it had independently of statute.

In the *Wheeling Bridge case*, 13 How. 518, this Court decreed an injunction in favor of the State of Pennsylvania, enjoining the maintenance of an obstruction, although there was no statutory authority for an injunction in such cases. It was held that a *prima facie* case for the exercise of equity jurisdiction had been made out and—

Such a proceeding is as common and as free from difficulty as an ordinary injunction bill.

In that case, however, the State of Pennsylvania alleged and, it was held, had sufficiently shown a property interest to be protected. That the United States need have neither a property interest nor statutory authority to protect interstate commerce

from interference was made clear In re Debs, 158 U. S. 564. We quote at length from the opinion (pp. 581-591):

If all the inhabitants of a state, or even a great body of them, should combine to obstruct interstate commerce or the transportation of the mails, prosecutions for such offenses had in such a community would be doomed in advance to failure. And if the certainty of such failure was known, and the national government had no other way to enforce the freedom of interstate commerce and the transportation of the mails than by prosecution and punishment for interference therewith, the whole interests of the nation in these respects would be at the absolute mercy of a portion of the inhabitants of that single state.

But there is no such impotency in the national government. *The entire strength of the nation may be used to enforce in any part of the land the full and free exercise of all national powers and the security of all rights entrusted by the Constitution to its care.* The strong arm of the national government may be put forth to brush away all obstructions to the freedom of interstate commerce or the transportation of the mails. If the emergency arises, the army of the nation, and all its militia, are at the service of the nation to compel obedience to its laws.

But passing to the second question, is there no other alternative than the use of force on the part of the executive authorities whenever obstructions arise to the freedom of interstate commerce or the transportation of the mails?

Is the army the only instrument by which rights of the public can be enforced and the peace of the nation preserved? Grant that any public nuisance may be forcibly abated either at the instance of the authorities, or by any individual suffering private damage therefrom, the existence of this right of forcible abatement is not inconsistent with nor does it destroy the right of appeal in an orderly way to the courts for a judicial determination and an exercise of their powers by writ of injunction and otherwise to accomplish the same result. * * *

So, in the case before us, the right to use force does not exclude the right of appeal to the courts for a judicial determination and for the exercise of all their powers of prevention. *Indeed, it is more to the praise than to the blame of the government that, instead of determining for itself questions of right and wrong on the part of these petitioners and their associates and enforcing that determination by the club of the policeman and the bayonet of the soldier, it submitted all those questions to the peaceful determination of judicial tribunals, and invoked their consideration and judgment as to the measure of its rights and powers and the correlative obligations of those against whom it made complaint. And it is equally to the credit of the latter that the judgment of those tribunals was by the great body of them respected and the troubles which threatened so much disaster terminated.*

* * * * *

Every government, entrusted by the very terms of its being with powers and duties to be exercised and discharged for the general welfare, has a right to apply to its own courts for any proper assistance in the exercise of the one and the discharge of the other, and it is no sufficient answer to its appeal to one of those courts that it has no pecuniary interest in the matter. The obligations which it is under to promote the interest of all and to prevent the wrong-doing of one resulting in injury to the general welfare is often of itself sufficient to give it a standing in court. This proposition in some of its relations has heretofore received the sanction of this court.

The Court then calls attention to the holdings in *United States v. San Jacinto Tin Co.*, 125 U. S. 273, 31 L. ed. 747, and *U. S. v. American Bell Teleph. Co.*, 128 U. S. 315, 32 L. ed. 450, and continues:

It is obvious from these decisions that while it is not the province of the government to interfere in any mere matter of private controversy between individuals, or to use its great powers to enforce the rights of one against another, yet, whenever the wrongs complained of are such as affect the public at large, and are in respect of matters which by the Constitution are entrusted to the care of the nation, and concerning which the nation owes the duty to all the citizens of securing to them their common rights, then the mere fact that the government has no pecuniary interest in the controversy is not sufficient to exclude it from the courts, or prevent it from taking

measures therein to fully discharge those constitutional duties.

The national government, given by the Constitution power to regulate interstate commerce, has by express statute assumed jurisdiction over such commerce when carried upon railroads. It is charged, therefore, with the duty of keeping those highways of interstate commerce free from obstruction, for it *has always been recognized as one of the powers and duties of a government to remove obstructions from the highways under its control.*

* * * * *

Indeed, the obstruction of a highway is a public nuisance (4 Blackstone, 167) and a public nuisance has always been held subject to abatement at the instance of the government. *Atty. Gen. v. Tudor Ice Co.* 104 Mass. 239, 244; 6 Am. Rep. 227; *Atty. Gen. v. Jamaica Pond Aqueduct Corp.* 133 Mass. 361; *Pine City v. Munch*, 42 Minn. 342, 8 L. R. A. 768; *State v. Goodnight*, 70 Tex. 682.

After discussion and approval of other cases, including *Gilman v. Philadelphia*, 70 U. S. 713, 18 L. ed. 96 and the *Wheeling Bridge case*, 13 How. 518, this Court said:

It is said that seldom have the courts assumed jurisdiction to restrain by injunction in suits brought by the government, either state or national, obstructions to highways, either artificial or natural. This is undoubtedly true, but the reason is that the necessity for such interference has only been occasional.

The Debs case has been quoted with approval in connection with questions pertinent to the present case in *Louisiana v. Texas*, 176 U. S. 1, 19; *United States v. Trans-Missouri Freight Association*, 166 U. S. 290, 343; *Missouri v. Illinois*, 180 U. S. 208, 236; *Northern Securities Company v. United States*, 193 U. S. 197, 356.

B

The doctrine of comparative injury has no application to a suit by the United States to protect its sovereign power over interstate commerce

In *Ruppert v. Caffey*, 251 U. S. 264, this Court said (p. 301):

While this is a government of enumerated powers, it has full attributes of sovereignty within the limits of those powers.

As was stated in *Re Debs*, 158 U. S. 564, 582:

The entire strength of the nation may be used to enforce in any part of the land the full and free exercise of all national powers and the security of all rights intrusted by the Constitution to its care. The strong arm of the national government may be put forth to brush away all obstructions to the freedom of interstate commerce or the transportation of the mails. If the emergency arises, the army of the nation, and all its militia, are at the service of the nation to compel obedience to its laws.

Must the United States, because it chose rather to submit this case "to the peaceful determination of judicial tribunals" have its sovereign rights made a delusion by a "comparison of equities?"

There is no room in our scheme of government for the assertion of state power in hostility to the authorized exercise of Federal power. (*Minnesota Rate Cases*, 230 U. S. 352, 399.)

There *would* be such room if allowance were made for a "comparison of equities" when the United States has not only asserted its paramount control but has proved an interference with that control by a state agency such as appellant. See the exhaustive note with respect to the doctrine of comparative injury in enjoining nuisances in 31 L. R. A. (N. S.) 881.

There *can* be no equities in a case such as this. Either the United States has proved a violation of Section 10 of the Act of March 3, 1899 or it has not. If it has, there is an unlawful assertion of State power in hostility to the sovereign power of the Nation, and no excuse or justification can be recognized. The hostility must cease, and it is the State which must withdraw from the controversy.

What *are* the equities that appellant desires that this Court consider?

(1) Is it the fact that the appellant, at the end of 1892 or the early part of 1893, commenced to excavate in the State of Illinois? It did so in the face of the Act of Congress of 1890 and of the suggestions on every hand that Federal cooperation would be necessary.

(2) Or the fact that appellant continued to spend money after 1896? It did so in the face of an express

warning from the Board of Engineers in 1895 and a notice from the Secretary of War in 1896 that no authority was yet given it to divert water from the Chicago River.

(3) Or the fact that it continued to spend money after 1899? This was in the face of warnings too numerous to mention, in the reports of the Engineer in Charge at Chicago and in the conditions of the permits and in the provisions of the Act of 1899, which were constantly brought to its attention?

(4) Or the fact that it continued to spend money after the Calumet River Suit was instituted? or the Main Channel Suit?

Thus we might go on, but it is unnecessary. Yes, the appellant has expended over \$75,000,000 of the money of taxpayers, not in reliance upon, or because of putting faith in any misleading assertion or act of appellee's officers or agents, but on a *gamble* that the United States would not put an end to it. The effect of the execution of its projects upon the navigable waters of the United States was put up to it squarely at every stage of its negotiations with the Government. The appellant seemed to ignore that its canal was in the United States, and subject, always, to Federal control.

The *equities* that appellant now asserts are nothing more than the results of *defiance* of unquestionable Federal authority. Were the advantages of unlawful acts ever deemed to create *equities* in the law breaker?

And have equities ever been asserted against a sovereign right? The principle for which appellant contends is the same principle to which this Court, in *Union Bridge Co. v. United States*, 204 U. S. 401, referred as one which "would seriously impair the exercise of the beneficent power of the government to secure the free and unobstructed navigation of the waterways of the United States." (See *supra*, p. 267.)

Appellant asserts that the injury to appellee is comparatively slight and may be easily compensated. That is for the appellee, not appellant, to judge, and Congress and the Secretary of War have passed upon the question. Their determination is conclusive. The same contentions were made in the *Wheeling Bridge Case*, 13 How. 518, 568:

But, it is said, the bridge constitutes no serious obstruction to the navigation of the Ohio; that only seven steamboats, of two hundred and thirty which ply upon the river as high as Pittsburg, are obstructed; and that arises from the height of their chimneys, which might be lowered at a small expense, in passing under the bridge; that, by the introduction of blowers, the chimneys might be shortened without lessening the speed of the boats; that the goods and passengers which are conveyed on the public lines of communication, between Pittsburg and Philadelphia, could be as well conveyed on boats of lower chimneys, and consequently the State, as proprietor of those lines, if at all injured,

is injured so inconsiderably as not to lay the foundation of this procedure; that none of the packets or the other boats on the river are owned by the State of Pennsylvania.

This Court said further (p. 578):

The Bridge Company had legal notice of the institution of the suit, and of the application for an injunction to stay their proceedings, before their cables were thrown across the river. This should have induced them to suspend, for a time, their great work, alike creditable to the enterprise of their citizens, and the genius and science of the engineer who planned the bridge and superintended its construction. It is a matter of regret that, by the prosecution and completion of the bridge, they have incurred a high responsibility.

See also *Miller v. Mayor of New York*, 109 U. S. 385.

Under the pleadings in this case, the appellee offered no evidence to meet that introduced by appellant in support of its affirmative defenses, as there was a motion to strike pending. We do not, of course, concede the correctness of any of appellant's exaggerated figures either as to the amount of diversion really necessary to take care of all practical danger from a maximum run-off in the Chicago River or as to the cost of installing purification works such as other cities on the Great Lakes and elsewhere have done. We merely state, that conceding them to be true, they are immaterial and constitute no defense. We have

noted, however, that in spite of the supposed fatal effects of the run-off of 10,000 c. s. f. in the Chicago River, the appellant was able to manage with a great deal less from 1900 to after 1913 and even now claims to ask only 8,000 c. s. f. so far as the Chicago River is concerned (the other 2,000 c. s. f. to be diverted through the Calumet River). Of this 8,000 c. s. f. a large part, probably over 1,000 c. s. f., is from drinking water, etc. The maximum run-off of the Calumet River is 15,700 c. s. f. and yet appellant has never planned on more than 4,000 c. s. f. diversion through that river.

The power of appellant to raise money by taxation or otherwise is a matter for the State of Illinois. The appellant assumes to justify its acts under State authority: presumably it can obtain the necessary authority to raise money.

The equities involved in this case, using the word in a broad and not a legal sense, are not with the appellant.

In asking this Court to balance "equities," appellant is in effect asking it to disregard the decision of Congress and the Secretary of War, and to grant appellant a *permit* to continue its defiance of Federal authority. If there are equities, the proper forum in which to present them is Congress.

C

The lower court did not err in denying appellant's motion of July 12, 1920

The appellee sought by suit instituted in the proper forum to restrain appellant from diverting more than

4,167 c. s. f., the limitation placed upon it by the Secretary of War. By its motion of July 12, 1920, appellant in effect asked permission from the *court* to divert not exceeding 10,000 c. s. f. on the strength of an offer which it then made to pay the expense of constructing such regulating and compensating works as the United States might determine to build to offset for the lowering of the lake levels and connecting channels, due to a diversion of 10,000 c. s. f. The works were to be built in such places as the St. Clair and Niagara Rivers. We need not dwell on the feasibility or probable expense of such works (as to which questions there was extreme difference of opinion—see Statement of the Case, p. 107), or whether the appellant can ever constitutionally spend money of Illinois taxpayers on submerged weirs on the international boundary. The fundamental legal obstacles to any such decree are sufficient without consideration of questions of fact.

- (1) APPELLANT MAY NOT BE UPHELD IN ITS UNLAWFUL DIVERSION BY ITS OFFER TO GIVE APPELLEE SOMETHING ELSE OF ALLEGED EQUAL VALUE

In *Kansas v. Colorado*, 206 U. S. 46, this Court said p. 100 :

Colorado could not be upheld in appropriating the entire flow of the Arkansas river, on the ground that it is willing to give, and does give, to Kansas something else which may be considered of equal value. That would be equivalent to this court's making a contract between the two states, and that it is not authorized to do.

This principle applies with even greater force to a suit by the United States to enforce a sovereign right.

- (2) THE POWER OF GRANTING OR REFUSING AUTHORIZATION LIES IN CONGRESS, AND, SO FAR AS IT HAS BEEN DELEGATED, IN THE CHIEF OF ENGINEERS AND THE SECRETARY OF WAR

In the case of *Wilson v. Shaw*, 204 U. S. 2432, this court said:

We have no supervising control over the political branch of the Government in its action within the limits of the Constitution. *Jones v. United States*, 137 U. S. 202, and cases cited in the opinion; *Re Cooper*, 143 U. S. 472, 499, 503.

- (3) UNDER THE TERMS OF THE CANADIAN BOUNDARY WATERS TREATY OF JANUARY 11, 1909, THE CONSTRUCTION OF SUCH WORKS AS THE APPELLANT PROPOSES CAN NOT BE UNDERTAKEN WITHOUT THE APPROVAL OF THE INTERNATIONAL JOINT COMMISSION

Article 4 of the Treaty reads as follows:

The High Contracting Parties agree that, except in cases provided for by special agreement between them, they will not permit the construction or maintenance on their respective sides of the boundary of any remedial or protective works or any dams or other obstructions in waters flowing from boundary waters or in waters at a lower level than the boundary in rivers flowing across the boundary, the effect of which is to raise the natural level of waters on the other side of the boundary

unless the construction or maintenance thereof is approved by the aforesaid International Joint Commission.

Article 8 of the Treaty provides:

This International Joint Commission shall have jurisdiction over and shall pass upon all cases involving the use or obstruction or diversion of the waters with respect to which under Articles 3 and 4 of this Treaty the approval of this Commission is required.

* * * * *

The Commission in its discretion may make its approval in any case conditional upon the construction of remedial or protective works to compensate so far as possible for the particular use or diversion proposed, and in such cases may require that suitable and adequate provision, approved by the Commission, be made for the protection and indemnity against injury of any interests on either side of the boundary.

In cases involving the elevation of the natural level of waters on either side of the line as a result of the construction or maintenance on the other side of remedial or protective works or dams or other obstructions in boundary waters or in waters flowing therefrom or in waters below the boundary in rivers flowing across the boundary, the Commission shall require, as a condition of its approval thereof, that suitable and adequate provision, approved by it, be made for the protection and indemnity of all interests on the other side of the line which may be injured thereby.

The majority of the Commissioners shall have power to render a decision. In case the Commission is evenly divided upon any question or matter presented to it for decision, separate reports shall be made by the Commissioners on each side to their own Government. The High Contracting Parties shall thereupon endeavor to agree upon an adjustment of the question or matter of difference, and if an agreement is reached between them, it shall be reduced to writing in the form of a Protocol, and shall be communicated to the Commissioners, who shall take such further proceedings as may be necessary to carry out such agreement. (Rec., Vol. IV, pp. 2564-2567.)

If this Court were, to permit by its decree a diversion of 10,000 c. s. f. it would be invading not only the field of political questions committed to Congress, but also the field of international questions committed to an international tribunal.

- (4) THE DECREE WHICH APPELLANT PROPOSES WOULD BE VOID AND INOPERATIVE, IN THAT IT WOULD CONTAIN A CONDITION WHICH THE COURT WOULD BE POWERLESS TO ENFORCE

The construction of submerged weirs in the Niagara and St. Clair Rivers may never be authorized by Congress. Even if authorized by Congress they may never be permitted by the International Joint Commission. If they are authorized, they may cost many times what the appellant has in mind or is able to pay. The appellant will feel free to say that the works are not such as it had in mind when it made

the offer. There will be no way of determining the meaning of such a decree or the proper manner of enforcing it. In the meantime appellant will be diverting 10,000 c. s. f. and, to judge by its past performances, considerably more.

In *Kansas City S. R. Co. v. Kaw Valley Drainage District*, 233 U. S. 75, it was recognized that such a decree could not be entered. We quote from the opinion as follows (pp. 77-78):

The supreme court [of Kansas] recognized that it could not order the bridges to be raised to the required height without the authority of the Secretary of War.

* * * * *

But the court went on, on the assumption that it would lead to the elevation of the bridges, and seemingly for the purpose of accomplishing indirectly what it admitted that it could not do directly, to make an unqualified absolute order, as we have said, that the defendants should clear the channel of all obstructions on their lines up to the specified heights—in other words, to remove the bridges as they stand.

These judgments must be taken as they read upon their face. They are not conditional orders to raise the bridge if the defendants can obtain the consent of parties not before the court, and of one authority at least not subject to its control. They can not be qualified by speculation as to what is likely to happen in fact. They are out-and-out orders to remove bridges that are

a necessary part of lines of commerce by rail among the states. But that subject matter is under the exclusive control of Congress and is not one that it has left to the states until there shall be further action on its part.

In *Corpus Juris*, Vol. 21, p. 658, we find the following:

A decree should ascertain and fix with definiteness and certainty the rights and liabilities of the respective parties to the cause. If it is uncertain and indefinite in these particulars it is at least erroneous and may be void.

and on pp. 645-6, the following:

A final decree whose validity and force depend upon the performance of some condition by one of the parties is void.

See also 14 Ruling Case Law, 321; 25 L. R. A. (N. S.) 271, note; *American School Furniture Co. v. Sauder Co.*, 106 Fed. 731; *Hawley v. State Bank*, 134 Ill. App. 96; *Bank of Commerce v. Goolaby*, 129 Ark. 416, 196 S. W. 803; *Simmons v. Jones*, 118 N. Car. 472, 24 S. E. 114; *Pennsylvania Co. v. Bond*, 99 Ill. App. 535 (affirmed in 202 Ill. 95, 66 N. E. 941).

In the case of *Pennsylvania Co. v. Bond*, *supra*, the Appellate Court said, on p. 542:

This portion of the decree is doubtless open to objection. By its terms it becomes effective only if it shall appear that these things have been done. How it is to be determined whether they have been done, the decree does not state. Why counsel should have submitted to the chancellor a decree containing

such a condition, especially when the evidence showed that the condition had been already fulfilled, we are at a loss to discover. This part of the decree is by its terms inoperative.

In the case of *Bank of Commerce v. Goolsby*, 129 Ark. 416, 446 the Supreme Court of Arkansas said:

The decree in favor of J. H. Frost, E. B. Russum, A. N. Cole, R. O. Herbert, Alta Blaylock, J. O. Gunter, C. L. Pyle, W. H. Cole, R. T. Powell, Lawrence Wright, R. P. Reynolds, E. D. Vann, and J. O. Johnson, against the directors were upon the contingency or condition that each of these parties should pay the decrees rendered against them respectively in favor of the bank. These decrees were not only anomalous, but they were without authority of law and void.

That a judgment *in praesenti* can not be rendered and grounded upon a future condition or contingency, see *Battell & Collins v. Lowery et al.*, 46 Iowa 49. In the course of the opinion in that case the court said:

"If there was a present judgment, it was at most a judgment that there should be a judgment. But we cannot sanction such an anomalous proceeding."

The cases cited by appellant to the effect that a court of equity may impose conditions on relief granted to a complainant asking an injunction are so plainly inapplicable to the case at bar that discussion of the proposition seems a work of supererogation. The appellant does not seek to impose a condition on the appellee, for the court admittedly can not

require Congress or the Secretary of War to authorize the building of the compensating works. The appellant instead is seeking by indirection to obtain from the court a permit to do something forbidden by valid legislation, and as a consideration for the dispensation offers to submit to a condition which can never be enforced against it. It asks that its illegal acts be legalized.

Cases having to do with the rights of a court of equity to require security in the form of a bond from a complainant or to require that a complainant recognize an equitable right of the defendant are not in point. The maxim that he must do equity who asks it has no application to the facts now before the court.

D

The decree for an injunction should be effective immediately

Under its Point IX (b) appellant argues that the operation of a decree for an injunction should be postponed until "appellant and the cities, villages, and towns within its limits can readjust their works of sewage disposal or of purifying the water supply." (Appellant's Brief, p. 218.) Apparently appellant is really asking a postponement until at least 1945. Appellant plans, between now and 1945, to construct artificial purification works *only* to take care of sewage *in excess of that disposed of by 10,000 c. s. f.* After that it plans to install works to purify the sewage now taken care of by the unlawful diversion. Having in mind the time already wasted this proposal simply

postpones the vindication of the rights of the United States to the Greek Kalends. Substantially the only reason suggested by appellant for the long delay is that *state* limitations on appellant's power to raise revenue by taxation and bonds will not permit an earlier accomplishment of these objects. The United States need not await the pleasure of the Legislature of Illinois to enforce the rights of the former.

If this Court should deem these matters material, appellee should have an opportunity to controvert the testimony.

Appellant's argument under this heading is but a reiteration of what it has elsewhere urged under the heading of "comparison of equities" and also in connection with its motion of July 12, 1920. The answer, too, is the same.

In the first place, to enter a decree, such as appellant asks, is but to recognize that appellant *has* equities or a partial *defense* against the claim of the United States. The paramount power of the United States over interstate commerce becomes subject to conditions not to be found in the Constitution and arising solely from the unlawful and reckless acts of appellant.

As was stated in the Debs case, 158 U. S. 564, the United States need not have appealed to its Courts for the peaceful determination of the questions arising from a defiance of its sovereign power:

The strong arm of the national government may be put forth to brush away all obstructions to the freedom of interstate

commerce or the transportation of the mails. If the emergency arises, the army of the nation, and all its militia, are at the service of the nation to compel obedience to its laws.

Appellant's obstruction might have been forcibly abated. The right of the United States is absolute and immediate. Is it to be qualified because the state has placed a limitation on appellant's power to raise revenue?

In the second place, and this is really another aspect of the same question, to delay the operation of the injunction is, in effect, to give appellant a *permit* to divert 10,000 c. s. f. for the period of the delay. This, however, is a *legislative* power, to be exercised only by Congress and, to a limited extent, by the Chief of Engineers and the Secretary of War. Their determination is *conclusive* (see our Point III, E and F, *supra*, pp. 181 to 184).

The proper forum, then, for the presentation of appellant's equities is in Congress, the Secretary of War having determined the unauthorized diversion to be an obstruction. If time is needed for the adaptation of appellant's works to the decree, there is no reason to doubt that Congress will give that time by a temporary permit. It cannot be assumed that Congress will act arbitrarily or unjustly. Congress has already declared the diversion to be unlawful by its prohibition of obstructions in Section 10 of the Act of 1890. It is for Congress to give it a temporary legitimization if that is necessary.

In its Point IX (d), appellant concedes that "this matter should be settled by Congress." (Appellant's Brief, p. 226.) With this we thoroughly agree. It *has* been settled by Congress by its enactment of the Section 10 of the Act of 1899 and the present unauthorized diversion is prohibited and unlawful. If it is to be made lawful, either temporarily or permanently, that *too* must be settled by Congress, not by appellant.

Appellant has recognized, also, that Congress is the proper forum for relief for, as is stated in its brief (p. 226), bills in its behalf have been and *are* pending in Congress.

The hearings on these bills were not concluded when the last session of this Congress ended, and the Committee adjourned to take up the matter at the next session of this Congress. The said bills are still pending, undisposed of by said Committee on Rivers and Harbors of the House, no action has been taken thereon, and they have not yet been reported. (Appellant's Brief, p. 226.)

Presumably, Congress, in the exercise of its sovereign power, will accomplish a just solution of the problem. Whether the solution pleases appellant or not, it will be conclusive. It may find that appellant should be permitted to take 10,000 c. s. f. It may find that that is too much, and that appellant's arguments and conclusions based on the supposed maximum run-off of the Chicago River are not accurate or well founded. Is this Court to take from Congress its freedom and power to deter-

mine the matter conclusively and effectively for the best interests of the Nation as a whole? It would, if it suspended the operation of the injunction for any considerable period of time. This would enable the appellant again and for another period of many years to stake the lives and health of a great city on a *hazard* that by the end of that time it would have persuaded the United States to legalize its diversion. In this connection we quote from the opinion of the Secretary of War in his decision rendered January 8, 1913:

A recent report of the engineers of the sanitary commission (Oct. 12, 1911) proposes eventually to use some such method, but proposes to postpone its installation for a number of years to come, relying upon the present more wasteful method in the meanwhile. It is manifest that so long as the city is permitted to increase the amount of water which it may take from the Lakes, there will be a very strong temptation placed upon it to postpone a more scientific and possibly more expensive method of disposing of its sewage. This is particularly true in view of the fact that by so doing it may still further diminish its expenses by utilizing the water diverted from the Lakes for water power at Lockport. (Appellant's Narrative, pp. 35-36.)

It is now over sixteen years since the Calumet River suit was instituted; it is over eleven years since the Secretary of War rendered his decision denying appellant's application for an increased diversion; it is over twenty-eight years since appellant had its

first official warning (in the permit of July 3, 1896) that permission to divert water, and how much, were matters of uncertainty. Now it wants not only until 1945 but an indefinite period beyond that.

Appellant may, however, direct the attention of this Court to the decree in the first Wheeling Bridge Case, 13 How. 553. In that case the decree provided that the Bridge Company should have until the following February 1st to make the changes in its bridge necessary to remove the obstruction. The State of Pennsylvania, however, was suing in its proprietary right and the parties appeared before this Court in the character of private individuals. There was no occasion for a question of the assertion of the paramount and exclusive jurisdiction of Congress. When Congress later exercised that jurisdiction this Court held itself bound by it. (18 How. 421.)

This grave question, so long unsolved, will never be solved by the only department of the government that can solve it (namely, Congress) until this litigation is ended by this Court by a decree that is *definitive and obligatory*. Such a decree, declaring the just rights of the United States and requiring prompt respect by the Sanitary District for the rights of the Government, need not be inconsistent with any existing power of the Secretary of War, acting upon the recommendation of the Chief of Engineers, to grant a temporary permit pending the action of Congress.

CONCLUSION

The length of this brief, as well as the dimensions of the record in this case and the time consumed in bringing it to a conclusion, are out of all proportion to the difficulty of the legal issues. There never has been any serious question either of law or of fact since the institution of the Calumet River suit in 1908. While counsel for appellant have devoted an imposing brief to an attempt to justify appellant's conduct, their claims, on examination, prove to be mere challenges of elementary and well-settled principles of law, or arguments based on facts which are not present in this case.

In our review of the cases and the principles established by them, we have, therefore, been forced to make constant reference to "propositions which may have been thought axioms." We offer in excuse the considerations to which Mr. Chief Justice Marshall gave expression near the close of his opinion in *Gibbons v. Ogden*, 9 Wheat. 1, 222:

The conclusion to which we have come depends on a chain of principles which it was necessary to preserve unbroken; and, although some of them were thought nearly self-evident, the magnitude of the question, the weight of character belonging to those from whose judgment we dissent, and the argument at the bar demanded that we should assume nothing.

The instant case is unique in that while its far-reaching consequences affect vitally the interests of a whole nation and are of a magnitude not easily

exaggerated, its *justiciable* issues are comparatively insignificant. Appellant's brief argues little if anything that was not determined against appellant by Chief Justice Marshall in *Gibbons v. Ogden*, reaffirmed again and again by this court. It is a matter of regret that both appellant and appellee should have been caused the expenditure of time, money, and effort by this protracted and unnecessary litigation.

In insisting upon its paramount and exclusive control over the subject-matter of this litigation, the Government of the United States is performing an unpleasant and yet unavoidable duty. It is trustee of the navigable waters of the United States for the use, benefit and enjoyment of the whole Nation and it would betray that trust if it suffered appellant's defiant challenge to pass unnoticed, particularly when other States of the Nation and a foreign government are complaining. The appellee is entrusted, too, with exclusive control of the Nation's relations with foreign countries and it can not permit either a state or a municipal corporation to deal with its international problems.

Yet the Government's position must not be misunderstood. Nothing that has been urged before this court is intended to belittle or ignore the welfare of the great and progressive community growing within appellant's district. Whether the emergency is as great as certain of appellant's witnesses have intimated, or not, Chicago's problem in this matter is a serious and perplexing one, in which the entire Nation should take a sympathetic interest and to the

solution of which the Nation by its duly constituted authorities should address itself without delay.

In solving this question, however, the Nation must, under its Constitution, act through its Congress and not through its courts. Once this Court has made a declaration of appellee's sovereign right and has pronounced unlawful appellant's invasion of that right, the way will be cleared for the presentation of Chicago's case to the only forum which can render a valid decision on its merits. The issues will then be unobscured and uncomplicated by frivolous defenses, which, although advanced by appellant for many years, require little time of this or any court for their decision.

Throughout this litigation the Government of the United States and its legal representatives have not been unmindful of the welfare of the people of Chicago. Within the scope of its delegated power, the Federal Government (and not the Sanitary District) represents the people of Chicago; and, so representing them—whose truest welfare must be that of the whole people of the United States—the Federal Government has endeavored to act in this matter for the common welfare. Certainly it has not been lacking either in consideration or patience in this litigation. But in its deep concern for the welfare of Chicago, the Government must also have regard for the rights and interests of the great States and populous cities which have equal rights in the waters of Lake Michigan.

It is a condition and not a legal theory that confronts the Government. The question is not judicial, and this

Court will presume that the Legislative and Executive branches of the Government will not be unmindful of all the equities of the situation.

As this serious problem will require time for its careful consideration, the Government can not object, if the Secretary of War, acting on the recommendation of the Chief of Engineers, sees fit, pending the action of Congress, and as a modus vivendi to modify the existing permit and temporarily permit a greater diversion of waters.

If there be any doubt as to his power under the authority already delegated to him, the Government has no objection to a proviso in any decree that this Court may enter which will provide that the decree and the injunction, while immediately effective, shall be without prejudice to any temporary permit that the Secretary of War, acting upon the recommendation of the Chief of Engineers, may see fit to grant in the nature of a modus vivendi, pending the action of Congress in the premises.

This would set at rest the authority to make some temporary arrangement in the event the present Congress could not dispose of the question before it adjourns sine die on March 4, and especially in the event that Congress might not be again in session until the first Monday of December next.

It should, however, be made clear that the recognition and enforcement of the just rights of the United States Government are not to depend on or to await the conclusion of any agreement between the Sanitary District and the Government. It should not be a question of what

the Sanitary District should now concede, but what the Government of the United States should now allow.

If Congress, (or the Executive, to the extent of its delegated power,) voluntarily and in consideration of the inherent difficulty of the situation and the welfare of the people of Chicago gives some temporary permit until the whole problem can be finally solved by Congress, there should be no further opportunity for the Sanitary District to begin the litigation afresh and prolong it for another sixteen years under the plea that the decree of this Court was entered upon the faith that the Sanitary District and the United States Government should make some contract in the matter.

The question is not one of contract, but of governmental power. The United States has the right to stop the unlawful diversion by the Sanitary District of the waters of Lake Michigan for the uses of the City of Chicago.

In exercising this power, it need not bargain or contract with the Sanitary District.

Its power is not that of a coequal, as the learned counsel for the Sanitary District seem to intimate, but the power of a sovereign.

It was not necessary for the Government to go into the United States courts to assert rights which were so clear or to discharge duties which were so imperative. Nothing more clearly marks its consideration for the people of Chicago than that it consented, before enforcing its undeniable rights, to go into its courts, and the patience with which it has accepted the inordinate and

inexcusable delays in this litigation show the keen desire of the Government that no possible injustice should be done to the people of Chicago.

Is it not time to consider the welfare of other cities and great States? The interests of all the people, for whom in this matter the United States stands in a great trust relation, imperatively require that the power and authority of the United States should now be vindicated so clearly and emphatically that the Sanitary District may have no further excuse to persist in its unlawful diversion of lake waters by treating the decree of this Court as a pretext for fresh litigation. Assuredly the Sanitary District has had its day in court and the time has come when it should obey the laws of a country, of which it is but a part.

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Special Assistants to the Attorney General.

NOVEMBER, 1924.

considerable delay in this litigation when the
 desire of the Government that no possible
 should be done to the people of Chicago.

It is not true to say that the people of Chicago
 are not interested. The interests of all the people of
 whom in this matter the United States stands as a
 great first relation, represent only the people
 and interests of the United States should not be
 subjected to injury and consequently that the
 District may have no further excuse to delay in
 the case of this matter by leaving the people
 of this country in a state of confusion. It is
 the country District has had its day in court and the
 case has come to a close. It should be the case of a
 of which it is but a part.

James M. Ryan

James M. Ryan

Special Agent to the Library Congress

NOVEMBER 1921.

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No. 161.

In the Supreme Court of the United States

OCTOBER TERM, 1924.

THE SANITARY DISTRICT OF
CHICAGO,

vs.

THE UNITED STATES OF AMERICA,

Appellant,

Appellee.

APPEAL FROM THE
DISTRICT COURT OF
THE UNITED STATES
FOR THE NORTHERN
DISTRICT OF ILLINOIS,
EASTERN DIVISION.

THE CASE.

The injunction is (Rec. Vol. VIII, p. 131) that the Sanitary District be "enjoined from diverting or abstracting any waters from Lake Michigan over and above or in excess of 250,000 cubic feet per minute"—or 4167 feet per second.

The statement of defendant in answer and exhibits (Vol. VIII, pp. 9 and 58) is that on permit from Secretaries of War to take 250,000 feet per minute (4167 feet per second) defendant is abstracting 480,000 feet per minute, and the proof indicates even more, for purely local benefit and economy in sewage and trade waste disposal, cheapened by the manufacture of electric power on a large scale.

It cannot be denied and the court below finds, that on the evidence it cannot be controverted that this results in lowering lake levels, and the abstraction of the excess over 250,000 feet per minute impairs seriously the navigability of the Great Lakes water route—the great-

est and cheapest in the world. (The conceded total reduction of the lake levels is 5½ inches and even greater in the St. Lawrence River.) The Court finds that this inflicts a direct loss to those dependent on the water navigation route.

In the report of the International Waterways Commission, 1907, (Vol. IV, p. 2421), the direct yearly loss to vessels alone in freight earnings is conservatively placed at a million and a half, but this is put on good authority of President Livingstone, of the Lake Carriers' Association, on figures produced (Vol. I, pp. 205-6-7) at easily a half million dollars per inch of reduced draft, which would amount to some four million dollars annually for six inches—and that was in 1909. His testimony goes fully into the subject and see Coulby (Vol. I, p. 428). It must be taken into account that the traffic is rapidly increasing and has been since this testimony was given in 1909, the iron ore alone in 1920 amounting to 64,512,000 tons (Vol. VIII, p. 220).

But there is also the vast loss and damage to some 106 improved harbors in the States fronting the Great Lakes and over 50 on the Canadian side—and to the country at large and its industrial business dependent on the Great Lakes route for the annual movement of more than a hundred million tons of raw materials and other commodities wherein the saving in freight rates, compared with the cost of rail transportation, easily reaches or exceeds a quarter of a billion dollars every year.

The object and being and purpose of the defendant Sanitary District are avowedly for local sewage treatment only, to which has been added manufacture of electric power to reduce the expense. Mention is here

and there made in the Record of a navigation channel to connect the Mississippi system of river navigation with Chicago by joint action of the United States and Illinois; but that is still in the future. Examinations and surveys by the United States show, however, that the requirements of such a channel would not exceed 1,000 cubic feet per second (Vol. VIII, p. 54); and in the instant case the injunction is against the sanitary canal exceeding 4,167 cubic feet per second.

Defendant-appellant, confessing in answer the abstraction of a great excess of water over 4,167 feet per second and that the entire diversion and abstraction is used for non-navigation purposes referred to, a convenient, and with the power production, the cheaper method—claims the right under a general state statute of 1889, authorizing the formation of sanitary districts to care for local sewage, with some details applicable to such a District if one should be set up at Chicago, and in that case to take from the Lake and use whatever might be necessary to its purposes, and, under a supplemental act of 1903 specifically authorizing such District to erect works to develop power, raising the necessary money by local taxation.

The answer also avers, as will be later shown, that the Sanitary District has never recognized and denies any right or authority of the United States to interfere, although (see finding of District Court Vol. VIII, p. 151) from the very beginning it has applied to succeeding Secretaries of War not alone for the original permit, but repeatedly for increases thereof—which have been denied—and the thousands of pages of Record are replete with applications to the Secretary of War for permits or increase, official reports of government engineers, etc.

In fine, the right and authority of the general government are now unqualifiedly denied by defendant-appellant.

The injunction was granted by the District Court at Chicago. The facts and the law were passed upon and decision and opinion rendered (orally) by Judge Landis (Vol. VIII, p. 149), and again, after his retirement, on motion to modify, by Judge Carpenter (Vol. VIII, p. 127). And there appears also in the Record (Vol. VII, p. 7 and also Vol. VIII, p. 50) the well considered decision and opinion of Secretary of War Stimson (Jan. 8, 1913) in which he reviews the facts on the record made before him, and the law.

All three are challenged in their findings of fact and of law—which were to the effect that there was serious impairment and damage to the navigability of the Great Lakes water route from the unwarranted abstraction of water,—that the right of navigation was paramount and the United States did have authority and right to interfere, and, furthermore, that even for sewage disposal there was no justification or necessity for such lavish use and waste of water.

Statements of facts will have been presented in briefs of counsel for the parties. For our own part we deem the admissions of facts in the answer and exhibits of appellant herein to be sufficient to call for affirmance of the decree below by the two District Judges in Chicago, each of whom was frank to state a personal sympathy toward another result; and sufficient to support the conclusion and decision of so good a lawyer as Secretary Stimson, whose opinion is incorporated in the Record (Vol. VII, p. 7; also Vol. VIII, p. 50). The findings of all these the appellant specifically challenges.

CONNECTION OF THE LAKE CARRIERS' ASSOCIATION WITH THE SUBJECT.

The interest of the Lake Carriers' Association, which prompts the application for and leave to file this brief, should not be misunderstood. It is a business league composed of members who own and operate ships on the Great Lakes, not itself owning or operating or financially interested in any respect soever in any ship. But, through its membership, it has been alive to and at all times attentive to everything tending to the improvement of or threatening the navigable capacity and usefulness of this great water transportation route, which, to common knowledge, has grown to such enormous proportions as that it furnishes the country at large the cheapest and most efficient transportation known to history of such raw materials as grain, iron ore, coal, stone and other commodities, therein performing a ton-mile service exceeding 25 per cent of ton-mile service by all railroads in the United States, and being substantially one-half that of the railroads east of the Mississippi and north of the Ohio River in the general region in which the Great Lakes lie; and this at a cost, over and by means of this great, open, free, competitive national and international highway, which compared with similar service by railroads, if that were possible, is one-fifth or less. It is common knowledge also, that in the procession of business events this spread grows larger.

The haul from the head of Lake Superior or of Lake Michigan to the foot of Lake Erie is approximately a thousand miles. The rate of iron ore (by the long ton) for this distance, is not more than for a rail haul of 125 to 150 miles. Enough wheat to make a barrel of

flour is commonly carried a thousand miles for about 10 cents,—a ton of coal for less than the cost of shoveling it into the basement of one's home. These and other similar statistics appear fully in the Record, and, indeed, being of common knowledge, are neither in dispute nor disputable.

DIRECT LOSS TO SHIPPING.

The members of the Association, as private ship owners, have personal interest in averting the calamity of heavy direct loss, which will be later referred to, from the impairment of the navigable capacity of the Great Lakes, such as has been already occasioned by the abstraction of unprecedented quantities of water by the Sanitary District at Chicago, which, we may remind here in passing, is taken for purely local benefit for sewage purposes by, what the Record shows to be, a more convenient method, as against not only possible but other reasonable and well known methods in world wide use, which do not require any such extravagant waste.

THE PUBLIC INTEREST.

It is also fitting that such an Association present argument here on a broader question than personal loss to its members, since in the evolution of business in this country the farming interests of the northwest and the iron and steel industry depend upon the cheap transportation by this waterway, and as well the distribution of coal to the northwest. In the evolution billions of dollars have been invested and many millions of our population have come to be employed on the farms, in the mines of iron ore and coal, the quarries of stone, the docks and other terminals, furnaces, ships, shipbuilding plants and every conceivable thing that goes into the

cosmos of the gigantic industry and the social enterprises of the whole country.

Recognizing the necessity of taking advantage of this cheap water route and for its development and fullest utilization, the whole country being directly interested, our Government, and the same is true of the Canadian Government, has been keenly alive and satisfactorily active in its improvement and against any impairment for local benefit, throughout the whole route; improving it in respect to dangerous shoals and narrow and restricted channels connecting the different lakes. Even by 1911, (Vol. VI, p. 3624) our own Government had expended \$100,000,000. This has included the construction of great locks and appurtenant canal at Sault Ste. Marie to overcome the fall of nearly twenty feet between Lake Superior and the lower lakes; large improvement of channels at the foot of Lake Superior and throughout much of St. Mary's River, both above and below the locks at the Soo, down to Lake Huron, including an artificial cut of several miles to shorten the distance and avoid dangerous conditions in the navigation of the river, marking the channel with ranges and lights so the great steamers can run the river at night, and nearly all of this is under Government regulation in the navigation of ships. Not to particularize too far, again at the foot of Lake Huron and the head of St. Clair River, large improvements have been made, in enlarging, deepening and taking out obstructions to navigation, and again at the foot of St. Clair River, where it debouches into Lake St. Clair; then all of the 25 miles across Lake St. Clair, and, in the Detroit River, where, in its lower end, our Government has established, additional to previous channels, the greatest channel improvement in the world in the Livingstone Channel; and

so on below that and at the head of Lake Erie are miles of dredged improved channels, and at Buffalo a six million dollar improvement in the Black Rock Canal and lock, and Government assistance has been freely given in aid of terminal harbor improvements. Besides, many millions have been expended for lighthouses, fog signals and coast guard service.

Over all of this the Government exercises its supervision for the preservation and maintenance of the water route, and there is a system of lake surveys, a hydrographic service, and all of the adjuncts necessary to preserving and improving and making for greater usefulness to the nation all this as an open and competitive free waterway, without a dollar of tolls and over which, according to public statistics, 121,000,000 tons of cargoes are already carried in a single season of navigation.

From the Record in this case and from public and general Government statistics, and of general knowledge, the saving by this route to the people of the United States is in every year more than the total that the appellant claims to have been able to spend and would be required to spend to care for its sewage.

In considering a question of admiralty and maritime jurisdiction, Chief Justice Taney said of the Great Lakes in 1851, (*The Genessee Chief*, 12 Howard, at 453):

"If the meaning of these terms was now for the first time brought before this Court for consideration, there could, we think, be no hesitation in saying that the lakes and their connecting waters were embraced in them. These lakes are in truth inland seas. Different States border on them on one side, and a foreign nation on the other. A great and growing commerce is carried on upon them between different States and a foreign nation, which is sub-

ject to all the incidents and hazards that attend commerce on the ocean. Hostile fleets have encountered on them, and prizes been made; and every reason which existed for the grant of admiralty jurisdiction to the general government on the Atlantic seas, applies with equal force to the lakes. There is an equal necessity for the instance and for the prize power of the admiralty court to administer international law, and if the one cannot be established neither can the other."

Nine years later (1860) the court, by Nelson, J. said, (24 How. 38):

"According to the best official statistics, the value of the property annually, the subject of this commerce, exceeds \$600,000,000, employing more than sixteen hundred vessels, with an aggregate tonnage exceeding 400,000 tons. These vessels are duly licensed for the foreign trade, as well as for that carried on coastwise. This commerce, from its magnitude, and the well known perils incident to the lake navigation, deserves to be placed on the footing of commerce on the ocean; and, we think, in view of it, Congress could not have classed it with the business upon rivers, or inland navigation, in the sense in which we understand these terms.

These Lakes are usually designated by public men and jurists, when speaking of them, as great inland waters, inland seas, or great lakes; * * *."

The Record (Vol. IV. p. 2420) shows this tonnage by 1907 to have reached approximately two million tons Custom House measurement, which is approximately one-half the cargo carrying capacity, the numbers of the vessels being less because of their very great increase in size from year to year.

Later, in 1892, this Court, speaking through Field, J., said of the Great Lakes (146 U. S. 436):

"The Great Lakes are not in any appreciable respect affected by the tide, and yet on their waters, as said above, a large commerce is carried on, exceeding in many instances the entire commerce of States on the borders of the sea."

In report on "Diversion of Water from the Great Lakes and Niagara River," by the United States Board of Engineers for Rivers and Harbors, August 30, 1919, transmitted by the Secretary of War, December 7, 1920, to the Speaker of the House of Representatives, at page 91, we find:

"The Great Lakes system forms one of the world's greatest highways for water-borne transportation. The Great Lakes fleet moves more than 100,000,000 tons of freight each season. * * * These vessels are from 280 to 625 feet in length and have a carrying capacity of from 3,000 to 15,000 short tons. Most of them can be loaded to a draft of about 22 feet. They are the most economical carriers in the world, their rates usually being less than one tenth of a cent per ton-mile, and sometimes only a third of that amount. Rail rates are several times as much, often being at least 10 times the water rates. The annual saving over the cost of moving this same freight by rail exceeds a quarter of a billion dollars."

In reference to the waters of the Great Lakes, some general principles laid down by the International Waterways Commission may well be accepted:

1. In all navigable waters the use for navigation purposes is of primary and paramount right. The Great Lakes system, on the boundary between the United States and Canada, and finding its outlet by the St. Lawrence to the sea, should be maintained in its integrity.

2. Permanent or complete diversions of navigable waters or their tributary streams should only be permitted for domestic purposes and for the use of locks in navigation canals.

3. Diversions can be permitted of a temporary character, where the water is taken and returned, and when such diversion cannot interfere in any way with the interests of navigation.

As to the foregoing matters, we assume that apt reference to the record will be made in the main briefs, but all these matters are beyond dispute and of such public record and common knowledge that we believe the Court will not fail to take judicial notice.

We then have, according to published reports and the testimony in the case not to be disputed, that the direct loss to the individual ship owners by a diminution of 6 or even $5\frac{1}{2}$ inches, the conceded impairment here, would, according to testimony which should be accepted (Lake Carriers' President Vol. I, p. 205), amount to some four million dollars a year, assuming an average rate of 50 cents per ton as in 1916, which capitalized, at 5% would be eighty million dollars. And the testimony is that vessel owners keep close track of the stage of water and take advantage of every period of high stage to load their boats to greater draft. During the time when low stage prevails, they are correspondingly handicapped and the carrying capacity of the fleet is materially reduced.

The effect of abstracting 10,000 cubic feet per second at Chicago lowers the lake levels by at least $5\frac{1}{2}$ inches; that is, all of the lakes below Superior, which is some 20 feet above the waters below, requiring the locks at Sault Ste. Marie; and this effect is more serious as we go down the system through the St. Lawrence to the sea.

GREAT LAKES-MISSISSIPPI WATERWAY.

To dispose of the shibboleth of navigable canal or channel to connect with the Mississippi Valley improvement of our great interior rivers, surely we need go no further in this case where the decree prohibits and enjoins the use of more than 4167 cubic feet per second, than to say that the Record shows, according to Government report, that a depth of not over 10 feet is all that could be utilized for such a waterway, ample to comport with the channels of the Mississippi, existing or proposed, and sufficient to accommodate an annual commerce of one hundred million tons; and that less than 1,000 cubic feet per second from Lake Michigan would amply supply the needs and the use of such channel (Vol. VIII, p. 54). This is the utmost that the vision of this generation can see for the future.

The United States Statute of 1827 is referred to by defendant as in some sort justifying the granting of unlimited authority to take water from the Lakes for these unnecessary non-navigation purposes of dilution of sewage and manufacture of power for Chicago and its environs and all increase of population.

That act was in terms confined to a navigation canal to connect the Mississippi with the south end of Lake Michigan, not specifying Chicago or any particular point. It granted certain lands in aid of building such a canal. There was no right expressly conferred to take any water from the Lakes by that Act. But a canal, the Illinois and Michigan, was built and operated for years, without taking any appreciable quantity from the Lake, and that canal has apparently fallen into desuetude.

It is idle to argue this as supporting the claims of the Sanitary District (formed expressly for non-naviga-

tion purposes) to extract for that purpose many times the admitted requirements of a navigation channel.

The Illinois act of 1889, on the other hand, is a general statute authorizing formation of Sanitary Districts anywhere in the State—and providing only that if one is made to connect with certain rivers, the United States shall be authorized to operate said channel for navigation—“*but not to interfere with its control for sanitary or drainage purposes.*” See Sec. 24, Act 1889 (Exhibit A—Vol. VIII, p. 105).

DEFENDANT CLAIMS RIGHT TO UNLIMITED ABSTRACTION FOR SANITARY AND DRAINAGE PURPOSES.

The answer of the defendant in the main channel case (paragraph 26), in which the injunction was granted, avers that the Sanitary District was authorized by the State to construct a channel of sufficient size to take care of not only the sewage and drainage of the City of Chicago and its environs, but also the sewage and drainage as the increase of population might require.

In the Record, Vol. VII, p. 13 and VIII, p. 55, the published report of the President of the Drainage Canal, as was submitted at a hearing before Secretary Stimson, is quoted as saying:

“I am of the opinion that the presumption that our water supply is to be limited to 10,000 cubic feet per second, or 600,000 cubic feet per minute, is gratuitous and mischievous and should not be voiced by the officials of this district. I believe that we should have the volume requisite to our needs as they appear and are justified;”

on which the Secretary comments:

"It is therefore quite conceivable that compliance with their Sanitary needs according to this method of sanitation may eventually materially change this great national water course now existing through the Lakes."

In the answer, paragraph 40, (Vol. VIII, p. 87), it is further averred:

"Defendant has never recognized the right of the United States in any manner to interfere with the construction, operation or use of the Main Channel of the Sanitary District or any of its adjuncts or additions; that it has never recognized the right of the United States in any manner to determine or direct how the said Main Channel or its adjuncts or additions, as hereinbefore mentioned, should be operated or used, or the amount of water that should be abstracted from Lake Michigan through its various channels or adjuncts or additions thereto to carry out the provisions of said Act of May 29, 1889."

And in Paragraph 26 of the same answer, (Vol. VIII, p. 77), that, it was further provided by said Act, under which the Sanitary District was organized, that the channel, when completed, should be a navigable channel of the United States and that the United States should

"have authority to take over and operate said channel, for navigation purposes, but not for sanitary or drainage purposes."

The language of the statute, however, is "not to *interfere* with its control for sanitary or drainage purposes."

THERE ARE OTHER AVAILABLE METHODS OF SEWAGE DISPOSAL.

The answer admits that there are other methods of sewage disposal although claiming, in Paragraph 43, that the only method by which defendant can *efficiently* take care of and remove the sewage and drainage from its limits and protect the water supply of the inhabitants of Chicago and its environs is the one laid out under the Act of May 29, 1889, and acts amendatory and supplementary thereto. One of these subsequent acts was that of May 14, 1903, referred to in Paragraph 32 of the answer, (Vol. VIII, p. 81). It was:

“To enlarge the corporate limits of said District and to provide for the navigation of the channels created by said District, and to construct dams, water wheels and other works necessary to develop and render valuable power arising from the water passing through its channels, and levying taxes therefor.”

The answer then proceeds to say (Paragraph 32) that by about 1907 the defendant had then completed works at a cost of “approximately” \$5,000,000, producing power worth “approximately” \$900,000 per year net; which revenue “is used toward defraying the other expenses of defendant.”

Other testimony would tend to show a greater revenue, which would increase with increase of flow. The testimony of defendant's engineer, Randolph (Vol. VI, p. 3599) is that a flow of 10,000 cubic feet per second would develop Horse Power to the annual value of \$2,750,000—computed at the low rate of \$25.00 per H. P.,—at the net yearly value stated in the answer of \$30.00, it would be over three and a quarter millions.

It is to such uses that defendant puts the water abstracted from a great water navigation route, never to be returned, claiming good right to further increase the quantity according to its own view of its necessity for such use, and which it may well be said might go on until it would materially change this great natural water course existing through the Lakes.

We submit that it appears throughout the Record that Chicago can, by modern, approved, scientific methods well known and adopted by many other large communities, dispose of its sewage. It appears (Record, Vol. VIII, p. 192), that Chicago is itself erecting such works on a large scale. In the decision referred to of the Secretary of War in 1913 (Record, Vol. VII, p. 14 and VIII, p. 55), it was said that the evidence:

"satisfies me that it would be possible in one of several ways to at least so purify the sewage of Chicago as to require very much less water for its dilution than is now required by it in its unpurified condition. A recent report of the engineer of the sanitary commission (Oct. 12, 1911), proposes eventually to use some such method, but proposes to postpone its installation for a number of years to come, relying upon the present more wasteful method in the meanwhile. It is manifest that so long as the city is permitted to increase the amount of water which it may take from the Lakes, there will be a very strong temptation placed upon it to postpone a more scientific and possibly more expensive method of disposing of its sewage. This is particularly true in view of the fact that by so doing it may still further diminish its expenses by utilizing the water diverted from the Lakes for water power at Lockport."

**THERE IS NO ESTOPPEL AND NO ACQUIESCENCE
IN THE EXCESS DIVERSION.**

In paragraph 37 of the Answer (Vol. VIII, p. 84), endeavor is made by averments to attach some action of Congress through the permit of Secretary of War Alger and the action of Secretary Root in 1903, which limited the quantity to 250,000 feet per minute, and reports of the Waterways Commission, appropriations for surveys of tentative or possible channels for navigation, reports of engineers, and so on, with the effect in some indefinite way to estop the Government of the United States or deprive the Government from the exercise of its authority to safeguard the rights of the people of the United States against the impairment of the navigability of a great public, national and international water course. This is answered by the finding of the court below (Vol. VIII, p. 151)—that the Federal Government has been recognized from before the beginning of the diversion and that the constant attitude of the defendant was a recognition of the control of the Federal Government over this whole question.

The annual report for 1916 of Secretary of War Baker, at page 64, says this:

“A conditional permit was granted in 1901, authorizing the diversion of 4,167 cubic feet seconds, and this amount has continued to be the legal limit. The drawing of water from the Chicago River into the canal affects the general navigation interests of the country on account of the tendency of such diversion to lower the level of the waters of the Great Lakes. From the beginning the operations of the Sanitary District have been looked upon with disfavor by navigation interests, and the Secretary of War has not only declined to increase the

diversion temporarily authorized, but has adhered to the decision that the permit granted was of a temporary character and that no permanent diversion of the waters of Lake Michigan could be made without express authority from Congress. Nevertheless the Sanitary District has for many years been withdrawing a much larger amount of water than is authorized by this permit. Upon two different occasions the Sanitary District has refused to conform to decisions of the Secretary of War declining to grant authority for larger diversions and has declared its intention to continue excess diversions unless prevented by injunction. Accordingly, in 1908 and again in 1913, bills in equity were filed at the instance of the War Department by the Attorney General seeking to enjoin excess diversion. The two suits were consolidated and tried in the United States District Court for the Northern District of Illinois, but remain undecided.

It seems quite clear that with the growth of population in Chicago the authorities of the Sanitary District contemplate still larger diversions than those already made, perhaps, to the extent of 10,000 cubic feet seconds. This, it is estimated by the United States Lake Survey, would lower the waters of Lake Michigan and Lake Huron nearly 7 inches, Lake Erie about $5\frac{1}{2}$ inches, and Lake Ontario about $4\frac{1}{2}$ inches, mean lake levels, the reduction being much greater at low-water periods. The effect of such a lowering of lake levels would obviously be enormous losses to navigation interests and would necessitate large expenditures by the General Government for the restoration and reorganization of river and harbor improvements on the Great Lakes and their connecting waters, for which already appropriations aggregating more than \$90,000,000 have been made."

And see opinions of Judges Landis and Carpenter (Vol. VIII, p. 149, and p. 127).

LOCAL AS AGAINST GENERAL NATIONAL INTERESTS.

The case really is admitted to be on the facts a simple question of local convenience, advantage and gain, in defiance of the paramount right of navigation for which all this navigable water is held in trust for the public, and the authority and responsibility for the conservation of which is in the United States, as to waters of the United States and in a foreign nation as to its part of the navigable waters; and against the interest of all the rest of the people of the United States and, for that matter, of Canada, and all of the investments in and of other states and cities fronting the Great Lakes and the docks, ships, farms, mines, furnaces and all other ramifications involving investments of billions of dollars and the industrial and domestic interests of the millions of people, whose cause appeals to the Governments on both sides of the waterway through a length of many thousands of miles.

Grant, that Illinois may own the fee of the bed of the Lake. This is a qualified fee, burdened with the public trust for navigation. Illinois, in the general provisions of the Act of 1889, or in any special provision of that Act or in the subsequent Acts, has not pretended to grant to the Sanitary District the State's qualified title to the submerged lands of its Lake front (Record Vol. VIII, p. 103, Sec. 22, Act 1889). But if it had attempted this, it could not, by possibility, shake off the trust which qualifies its fee, much less may it be claimed that Illinois with about 60 miles of lake frontage could, if it would, impair the navigability of all the waters in and in front of the seven other states fronting the Lakes or any of the other thousands of miles of lake and river

frontage because over all the paramount public right of navigation and authority and responsibility are vested in the United States by reason of the complexity of state, individual and other right of control over their interstate commercial waters and their care and control, and the responsibility of supervising and protecting all these against private or local encroachment or impairment for local advantage and authority to protect all against any breach of the great trust.

SUGGESTION OF COMPENSATING WORKS AND TREATY.

As has been suggested it is not the purpose to argue *in extenso* all of the various facts that have been put forward by the appellant. In justification we may speak briefly of the appellant's suggestion about compensating works.

The Record shows that anything in the nature of works to effect a compensation for the lowering caused by the excess withdrawal of water at Chicago would involve some system of works throughout the whole Great Lakes and St. Lawrence waterway. This, as stated by Secretary Stimson (Vol. VIII, p. 65) would involve some joint arrangement with Canada. This is inescapable. The Record, while it speaks on the subject of such works, is silent as to any definite plan. There is no precedent—there are various suggestions.

It appears that as far back as 1900 there was a partial plan by a dam at the head of the Niagara River which was abandoned. Whether such works could be established, appears, as far as the record is concerned, to be a matter of conjecture and opinion. In other words, there is nothing tangible about the character of

the works, which would have to be some general character.

This suggestion was not accepted by the lower court and motion to suspend the entering of a decree for injunction was denied (Vol. VIII, p. 130). At the same reference appears the statement of the District Court that,

"It is doubtful whether the State of Illinois could authorize expenditures to be made in foreign states and foreign countries to restore the water levels."

We submit that in view of the claim of defendant that its finances and means of raising of funds will not enable it to complete the works for the scientific, modern method of sewage disposal and purification of water before 1945, it is a doubtful proposition to pay whatever may be the cost of such compensating works throughout the Lakes as might be decided necessary by the two governments, and we suggest that there can be little doubt of the right of a taxpayer in Illinois, or in the Sanitary District, to enjoin the imposition of taxes for the purpose of expending money in works in other states or in a foreign country, or both.

So far as the Treaty, itself, is concerned, as a recognition: It is clear in its terms and there is absolutely no recognition of the Chicago Drainage Canal District. That, as said by Secretary Stimson, seems to have been carefully excluded. There is no indication in the Treaty of the quantity of water being diverted and the published report of the Sanitary Board is not shown, and for all the record shows, they may have been representing a use not exceeding the 250,000 cubic feet before 1909, when the Treaty was negotiated; and indeed reference to any

well authenticated statistics will show that prior to 1910, the average withdrawal was about 4,000 feet; since the treaty, the amount has been greatly increased so as to reach not less than 8,000 feet, probably as much as 10,000. In the "Warren Report," of August 30, 1919, "Diversion of Water from the Great Lakes and Niagara River," page 176, these figures are given, on the authority of the Engineer of the Sanitary District:

1908—4421 feet
 1909—2766 feet
 1910—3458 feet
 1913—7191 feet
 1914—7105 feet
 1915—6971 feet
 1916—7325 feet
 1917—7786 feet.

CURRENT IN CHICAGO RIVER.

There is some engineering testimony descriptive of the Chicago River and improvements alleged to have been made by the Sanitary District of the City of Chicago or by the Government. But a dangerous current has been created and operates as a serious detriment of even that local port and to the navigation interests by the interference of the Sanitary District, as shown by the testimony of Livingstone (Vol. I. p. 419); Emerson (Vol. V, p. 3021); Jaenke (Vol. V, p. 3022); Minskey (Vol. V, p. 3023); Green (Vol. V, p. 3029); Hamilton (Vol. V, p. 3031) and Simons (Vol. V, p. 3033), whose cross examinations follow beginning Volume V, p. 3034. This is well summed up by Mr. Sullivan, set out in Volume VI, p. 3616, as follows:

"I would like to add a word as a vessel owner and a man operating steamers in the City of Chi-

cago. The local situation there is something extremely critical. Under the present flow of 4,000 cubic feet,—we presume it is 4,000 feet a second—navigation in the River is carried on at great hazard. The center pier structures and the swift current make it extremely dangerous and we have suffered loss of property and loss of life in consequence of these hazardous conditions. So far as any increase of the current goes, I should say it would mean disaster, and I am sure that so far as our ships are concerned we would not be able to operate them in the Chicago River. I do not want to appear as antagonistic to the Sanitary District, only in respect of the increasing of the flow so that it will make it impossible for us to navigate our boats. . . .

The current in the river in the Chicago River at present is extremely detrimental to the safe handling of boats, and any increase in the velocity of the current would mean disaster. It would simply close Chicago as a port against any of the so called modern ships, and to a large number of the vessels of an extremely smaller size."

This is based on conditions when the Sanitary District used, as Mr. Sullivan says, a flow of 4,000 feet, or practically the limit imposed by the Secretary of War in his conditional permit, since which time it is found and conceded that the flow is double or more; always the average is spoken of, but it is not a steady flow of the exact number of feet per second.

SUMMARY.

It is not our office and it is not our intention to go with any fullness into the questions, particularly the legal ones, necessarily to be argued by other counsel in the case, or do more than call to the attention of the

Court some of the points and some of the leading cases supporting, all which will be fully presented and argued by the other counsel in briefs and before the Court.

I.

The Great Lakes (Including Lake Michigan) and Connecting Rivers, Constitute a Great National and International Navigable Waterway.

The character and extent of the commerce carried on the Great Lakes is fully shown in the Record, both from the testimony of witnesses and also from Government reports. Mention might be made of the testimony of Ernst (Vol. 1, p. 62), Livingstone, (Vol. I, pp. 200, 398), Coulby, (Vol. I, p. 428), not to name many others. Then by way of official reports and documents, there are many (See Vol. IV, pp. 2406, 2420; Vol. VIII, p. 53); all of these show the enormous volume of the traffic which in a single season of navigation (8 months) has exceeded one hundred million tons. The port of Duluth-Superior, in point of water traffic handled, is the greatest in the world, and the Detroit River the most used navigable channel in the world. This Court has repeatedly taken notice of the amount and character of commerce on these inland seas. Three cases have already been mentioned:

The Genessee Chief, 12 How. 443, at 453;

Moore vs. American Transportation Co., 24 How. 1, at 38;

Illinois Central Railroad Co. vs. Illinois, 146 U. S. 387, at 436.

II.

The Abstraction of Water at Chicago Lowers Lake Levels.

While proof of this self evident fact is not necessary, such proof fully appears throughout the record; as for example, in the testimony of Noble, (Vol. I, p. 9), Haskell, (Vol. I, p. 35), Wilson, (Vol. I, p. 50).

The two District Judges found from the testimony that the abstraction of water did lower lake levels (Vol. VIII, pp. 129, 150). This was also the finding of Secretary of War Stimson after the full hearing before him, (Vol. VIII, p. 52), and it also appears from reports of the various Engineers, e. g., tabulated statement (Vol. IV, p. 2419). It may be taken as established that the abstraction of 10,000 cubic feet lowers the water of Lakes Michigan, Huron and Erie, as well as the rivers between Lakes Huron and Erie, where every inch is greatly needed, between 5 and 6 inches, and that the effect in the St. Lawrence River is even greater.

III.

The Lowering of Water Reduces Size of Cargoes.

It is shown by the testimony, particularly that of Haskell, (Vol. I, p. 30), Livingstone (Vol. I, pp. 200, 398) and Coulby (Vol. I, p. 428), that the large boats load to the limit allowed by the depth of the channels, particularly the shallow channels between Lakes Huron and Erie, and that one inch of water means from 75 to 100 tons of cargo, and this is confirmed by Reports of the Engineers. This lowering of navigable waters surely constitutes an interference with commerce and navigation.

IV.

The Right of Navigation is Paramount.

Many cases might be cited on this; see *United States vs. Chandler-Dunbar Company*, 229 U. S. 53, where in the syllabus this language is used:

“Every structure in the water of a navigable river is subordinate to the right of navigation, and must be removed, even if the owner sustain a loss thereby, if Congress, in assertion of its power over navigation, so determines.”

Cummings vs. Chicago, 188 U. S. 410, 427;

Greenleaf Johnson Lumber Co. vs. Garrison,

Secretary of War, 237 U. S. 251;

Willink vs. United States, 240 U. S. 572.

V.

The Authority of the National Government Overrides That of the States in Respect to Navigable Waters.

It is sufficient to quote from *United States vs. Rio Grande Irrigation Company*, 174 U. S. 690, at page 703, where Mr. Justice Brewer uses this language:

“Jurisdiction of the general Government over Interstate commerce and its natural highways vests in that Government the right to take all needed measures to preserve the navigability of the navigable water courses of the country, even against any state action.”

In *Cummings vs. Chicago*, 188 U. S., 410, at page 428, this is said to control of navigation:

“If the power of the state and that of the Federal Government come in conflict, the latter must control and the former yield.”

The Rivers and Harbors Acts of September 19, 1890, and of March 3, 1899, are Valid and Effective.

Whatever might have been argued when the Sanitary District commenced operations under the enabling act of the State of Illinois of May 29, 1889, since the decision by this Court in *Union Bridge Company vs. United States*, 204 U. S. 364, February, 1907, it must be considered settled that the Federal Government has supreme control of navigable waters and that Congress may delegate to the Secretary of War the power and authority to grant or to refuse applications of States, corporations or individuals, either to create obstructions such as bridges or piers, or "to alter or modify the course, location, condition or capacity of any port, roadstead, haven, harbor, canal, lake, harbor of refuge," etc.

Union Bridge Company vs. United States has been uniformly followed in subsequent decisions of this Court, such as *Greenleaf Johnson Lumber Company vs. Garrison, Secretary of War*, 237 U. S., 251, where in the syllabus there are the following very pertinent paragraphs:

"The power of the sovereign State or Nation is perpetual—not exhausted by one exercise—and all privileges granted in public waters are subject to that power; the exercise of which is not a taking of private property for public use but the lawful exercise of a governmental power for the common good.

When one acting under state authority erects anything in navigable waters he does so with full knowledge of the paramount authority of Congress to regulate commerce among the States and subject to the exercise of such authority at some future time by Congress.

The power of the States over navigable waters is subordinate to that of Congress and the State can grant no right to the soil of the bed of navigable waters which is not subject to Federal regulation."

VII.

Estoppel, Even if there Were Facts to Warrant Such as to a Private Individual, Cannot Operate Against the Government.

The most the Sanitary District ever secured from the United States was a revocable, conditional permit, limited to 250,000 feet per second, and the Record shows unequivocally that the various Secretaries of War (including Taft, Stimson and Baker) have persistently refused to enlarge the grant or to acquiesce in larger withdrawal.

Morris vs. United States, 174 U. S. 196, 282;
Union Bridge Company vs. United States, 204 U. S. 364.

VIII.

The Action Was Properly Brought in the Court Below.

While in the court below it appears that no question was raised as to the jurisdiction of that court, Judge Carpenter saying in his opinion (Vol. VIII, p. 129):

"The jurisdiction of the court has not and could not be challenged,"

some claim is now being made that the action was improperly brought, and that the court had no jurisdiction to entertain the complaint of the United States. The

language of the Rivers and Harbors Acts is sufficient grant of authority for the Attorney General to institute the action; but if that were not so, the United States, without any such statute, would have full power to invoke the aid of the courts in stopping irreparable damage to commerce and navigation.

Cotton vs. United States, 11 How. 229;

United States vs. Cook, 19 Wall. 594;

United States vs. Rio Grande Dam and Irrigation Company, 174 U. S. 690.

IX.

As Concededly the Sanitary District Is Withdrawing Water Greatly in Excess of the Permit, the Injunction Should Be Affirmed.

The Sanitary District applied for and received a permit from the United States Government to take from Lake Michigan water not exceeding in volume 4,167 cubic feet per second. It has made repeated applications to have the amount increased, but has met with refusal from every succeeding Secretary of War. Without the necessary permits, the Sanitary District has gone forward and defiantly taken all the water that it has thought it needed, up to 10,000 cubic feet per second, and now boldly takes the position that as a matter of right it is entitled to take all that it desires, without authority from the Federal Government and without any permit; and in pleadings as well as in testimony and in argument, denies the authority of the United States to regulate or stop the abstraction of water from Lake Michigan and the Great Lakes system. If the constitutionality and effectiveness of the Rivers and Harbors Acts are con-

ceded, as they must be in view of the repeated decisions by this Court, and the jurisdiction of the Court is established, there can be but one decision, and that is the affirmation of the judgment of the District Court.

Respectfully submitted,

HARVEY D. GOULDER,

*Counsel for Lake Carriers' Association,
as Amicus Curiae.*

November 5, 1924.

Kirby 11

Concurrent Jurisdiction Case
(Has not Congress taken
jurisdiction of the Great
Lakes?)

1822
1827 Congress invited all to
to connect waters of
Illinois
Lakes with the Mississippi
land granted

(Obj action of Congress
wasn't delegating or giving
up the power - Section
K said Section 10 or
12 did not regulate
the use of the water.

Congress has co-operated
with Illinois - Has
not tried to stop it.

into the diversion

No permit necessary
because Congress
gave it - Current
Case - St. Ry Case.

201 U.S.

The Act ^{or do not} cannot
delegate to Reg. power
to pass on the di-
version - See Section
10 - limited to navigat-
ion of rivers & how about
Lake navigat.

Practical Construction—
of the statute as to
the amount that
may be taken.
(Act of 1827 does
not-allow to
satisfaction)

Note: May the power
of Congress over Naviga-
tion be lessened or to in-
crease. In answer to the
account of the demands
for Sanitary work carried
on under State Law?

After Act of 1899 in 1904
gave full consent to remove
obstruction in the river.

Congress has recog-
nized the authority
& right to divert
the waters.

Actual depth of
harbor not less
than theoret-

They had nothing
to do with guarantee

Ques- is whether
the current of
Chgo R

2. Does the work
of sanitation, sub-
stantially interfere
with sc

The Eng'rs course of
the Ch will not

Sec - 9

M. Bean

Question is political not
justiciable.

[#]
Chronology

July 13, 1787

A. N. Ordinance - water-
common highways
etc.

32

Land grant. Not specific

37

Congress acting on Memorial
of people of Dec 3, 1790
Land grant to aid navigable.
(This no authority for a
\$10,000,000 for drainage)

39

It contained an act re-
ferment. Created the
Sanitary Dist. Made it
Mandating to take
quantities increasing
with population

40 -
Sep 19. Act provided
that obstructions are
forbidden - also
to operate the
Coast. Navigability
except as author-
ized by the Secy
of War.

2 - Bd of Eng^s appointed
by War Dept to pass on
effect

Mr. McK Eng^s asked for
information to decide

Report against the
project. ~~would~~ that
lower would lower
the lakes & —

46- July 3. Key sounding
5000 ft km.

Authority - shall not
be authority to make
a current.

47- Oct. Authority to
Warden River

48- leave to remove
rivers

2. Act strengthening
Act of 1840 - by
adding - Creation of
any structure not
affirmatively author-
ized by Congress.
etc etc

49 - Bridge & Pier
Referred to Local
WS. or Chgo -
See comments of

44 - Permit to open
the channel

0 . July 11. Permit
to make certain
Changes -
200 000 cu
ft per min -
Then 300 000

01 . Permit + \$250 000
Cu ft per Minute,

02 . Dist. added 300 000

3. All demand area of
Chicago.

107 Applicant to change
floor of Calumet
Engs reported that
this would lower
the Great Lakes
key diurnal

27. Permit to N Br Chy R

Heed what the

the river -

1907 Result of Sunday

Dist. to reverse

Culminated River

Notwithstanding re-
fusal -

2d Murders.

This action
has commenced.

~~Vol. ⁸⁷ III. IV.~~

Case should have
been disposed of
by ~~the~~ on bill &
answer

2, Ac. Granted per-
mit. Amount to
be withdrawn from
Lake Mich by both
rivers - 250000

3 Ac. Stomachic Spin
Refund 10000 Ea for
an ground of the
Nar of Great Lakes